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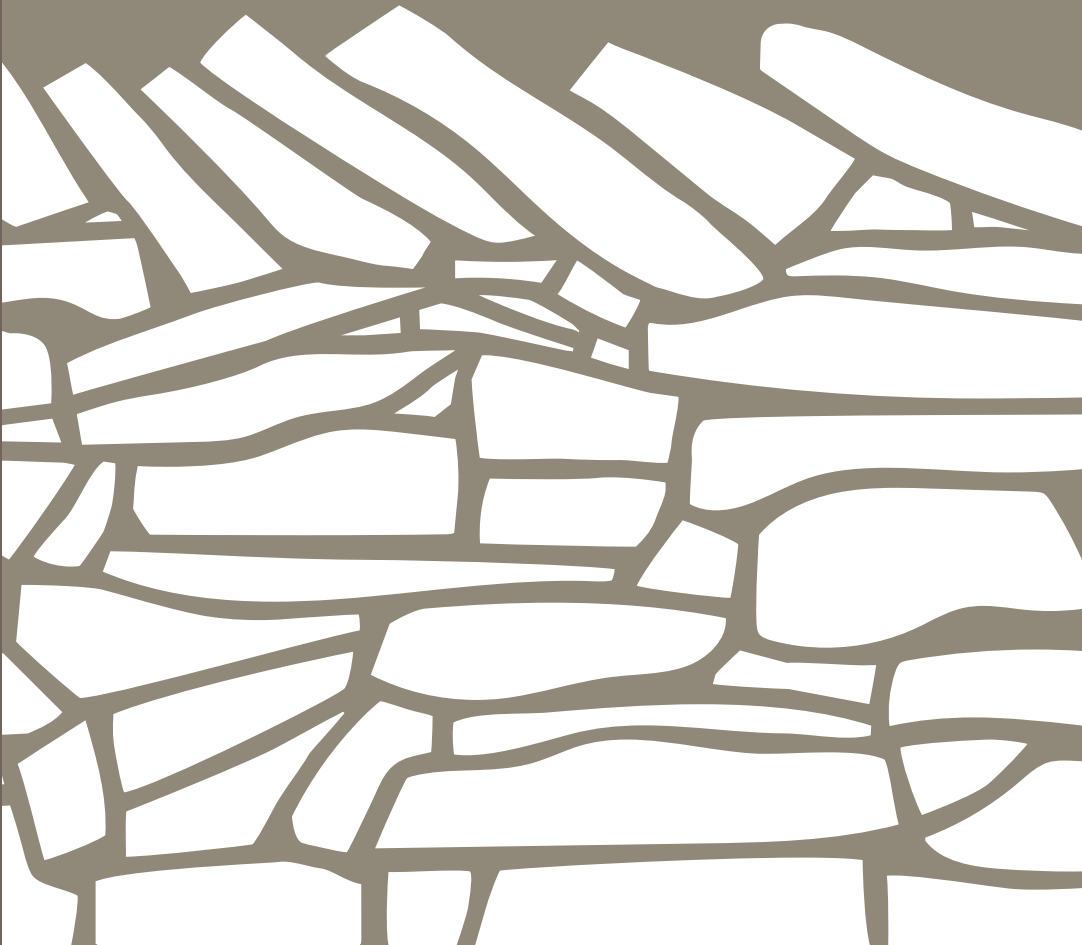
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SYMPHONY IN THE
FLINT HILLS

FLINT HILLS FIELD JOURNAL

Volume XII / 2020 / Stone







Untitled
Mark Feiden

SYMPHONY IN THE
FLINT HILLS

FIELD JOURNAL
VOLUME XII, 2020

THE FLINT HILLS:
ROOTED IN STONE

*With appreciation and thanks, the Field Journal
is made possible in part by a generous grant from
the Fred and Mary Koch Foundation.*

PREVIOUS SPREAD

All She Ever Wanted Was Everything
Laura Berman



Symphony in the Flint Hills Field Journal, Volume XII

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IN MEMORY

Catherine June Hoy 1944–2019



Photo by Laura Mead

Cathy Hoy, a devoted and loving wife and mother, served as an ardent supporter and protector of the Flint Hills. Reserved but eloquent and deliberate in speaking her mind, Cathy was equally graceful on horseback, on the dance floor with husband Jim, or in a heartfelt discussion of her values. Among her many contributions to this *Field Journal* was the vision and accomplishment of securing the Library of Congress designation for the series. Ad astra, dear Cathy.

FOLLOWING SPREAD

Fent's Prairie, Spring

Terry Evans





Rhythms 4
Kelly Yarbrough

SYMPHONY IN THE FLINT HILLS, INC.

OUR MISSION

*Heighten appreciation and knowledge
of the Flint Hills tallgrass prairie*

Symphony in the Flint Hills, Inc., works to build awareness for the last stand of tallgrass prairie. Those of us who live in the Flint Hills know this: the land dictates the terms and beauty of our lives, and our culture is shaped by this landscape. Its stone, soil, flora, and skies above pull on our souls and care for us, and we are called to care for this place in return.

We answer this call to stewardship with education. As the premiere Kansas arts organization that directly engages with the land, we collaborate with musicians, artists, historians, scientists, and community members to provide transcendent experiences that open our minds to both the traditions of today and the future of the Flint Hills of tomorrow.

The bedrock of our work is found here in our annual *Field Journal*. In this issue we explore the theme of Stone. The flinty stone underneath the hills kept them from being plowed. In excavating them, we built schools for our children, barns for our animals, and halls for our government. Today the beauty of limestone attracts visitors from all over the world to marvel at the fortitude of people who carved tools, erected fences, and made a life from this earth.

At Symphony in the Flint Hills, we envision a future where our efforts inspire people to strengthen the Kansas prairie by sustaining the region's unique culture and landscape. You can learn about ways to join us at symphonyintheflinthills.org.



BNSF
Jason Keller

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As the Major Presenting Sponsor for Symphony in the Flint Hills through 2021, BNSF Railway is honored this year to celebrate Stone in the Flint Hills. Shallow deposits of limestone, the foundation rock in the Flint Hills, are a critical element of prairie conservation, thus preserving the rich ecological diversity. BNSF’s commitment is strong in Kansas, partnering to build the state’s economy by accessing markets around the world. BNSF is proud to partner with Symphony in the Flint Hills to educate and celebrate the role of stone in protecting the prairie.



Some Treasures from the Tallgrass Prairie
Steve Snell

THE FLINT HILLS: ROOTED IN STONE

Symphony in the Flint Hills Field Journal, Volume XII, 2020

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Fences
Scott Bean

FOREWORD

If there's a defining feature of the Flint Hills, it's the rock that underlies the soil—the limestone and flinty chert that saved the uplands from the settler's plow and thus saved North America's last intact swath of tallgrass prairie.

We're celebrating this stony underlayment in the first two sections of this *Field Journal* with articles about stone—what's been built with it, how it got here, what it's composed of, and how it has impacted life today in the Flint Hills. Included are Q&A interviews with two Flint Hills residents whose life work is derived from the stone.

The third section of the *Field Journal* is devoted to the area surrounding Wabaunsee and neighboring counties. Through time, early residents had to be tough as stone as they carved out lives for themselves in these rugged Flint Hills.



ARCHITECTURE

A stone is ingrained with geological and historical memories.

Andy Goldsworthy

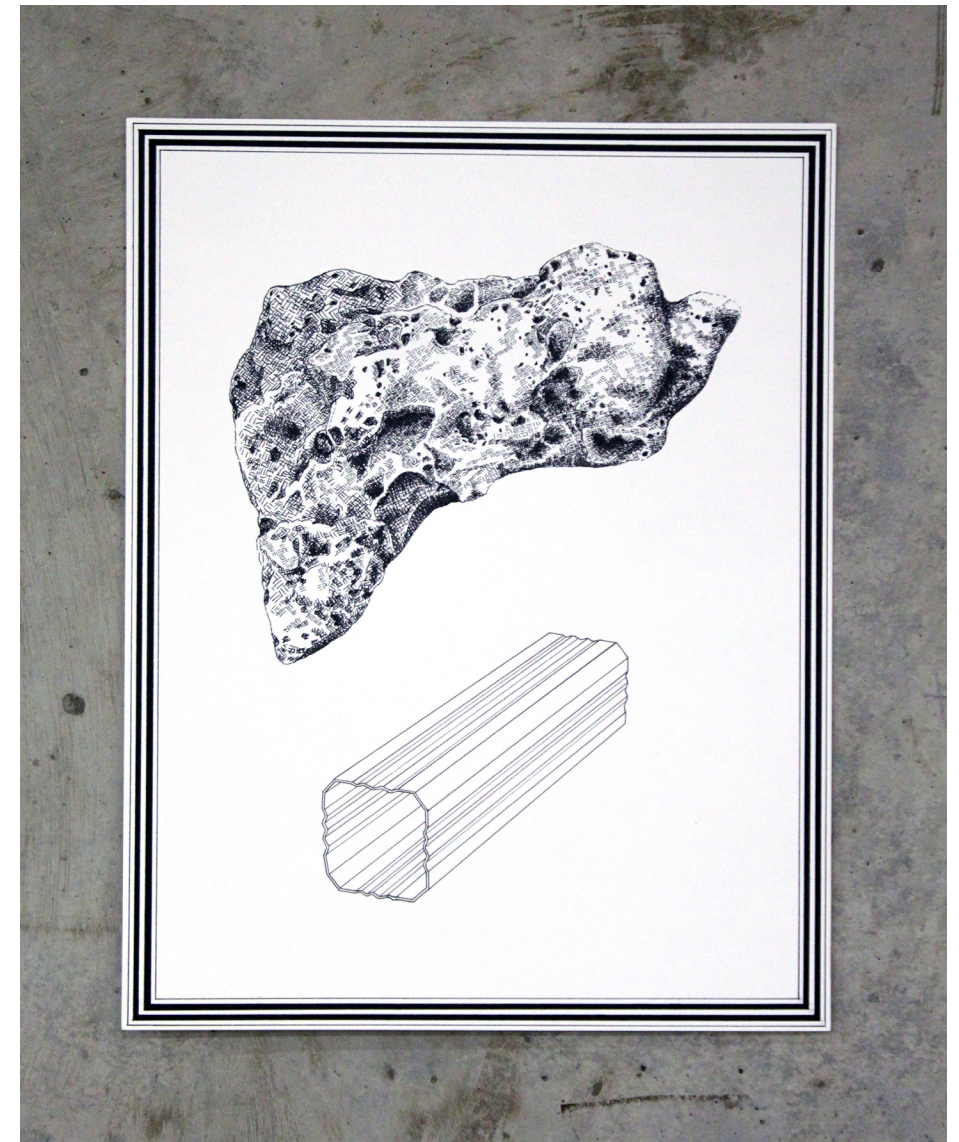
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Levi Robb

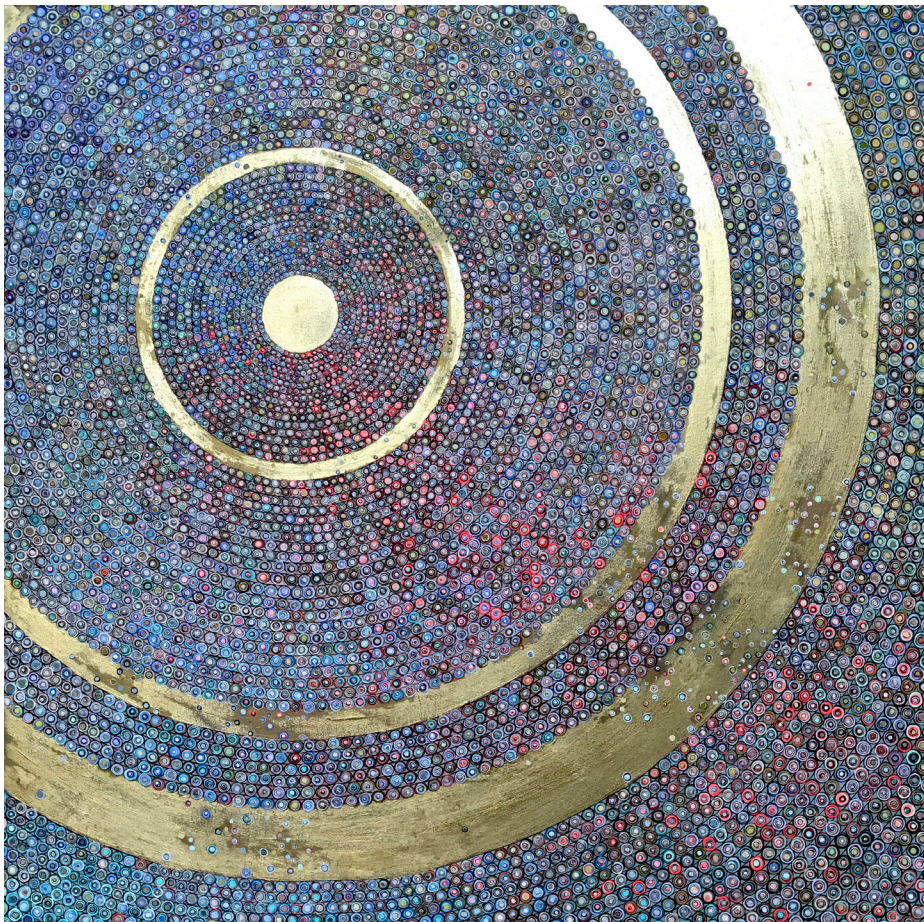
ROMANCING THE STONE

Hauled out of the earth and shaped by human hands, minds, and tools, limestone transforms into the building blocks and decorative elements of architecture, gifting the architect with a durable and versatile building material. Depending on the architectural style, a limestone building may be magnificent and imposing (witness the Kansas State Capitol); mysterious and intricate (observe a stone cellar); or perfectly placed in a fairy tale (the Chase County Courthouse).

Kansas is home to world-class limestone deposits, including those in the Flint Hills. These deposits served pioneers well. Absent an abundance of trees for building cabins, many of those settlers would have huddled in dirt-floored sod dugouts had it not been for the Flint Hills' limestone veins.



Untitled
Levi Robb



Gardens
Ruth Loveland

THE PEOPLE'S HOUSE: A HOME OF HEART AND STONE

You can't drive through Kansas without seeing it. It envelops our buildings, dots our parks in the form of benches and statues, and appears on the Kansas State Capitol. The common thread: limestone. And it's sourced right here in the Flint Hills of Kansas.

"As we travel across the state, these stone structures provide that connecting link between the past, the present, and even the future. The detail, the carving, the character of the architectural style is all because of that material," said TreanorHL's Historic Preservation Principal Vance Kelley.

Rich with geological and aquatic history, our tallgrass prairie region connects people and places statewide through this one unassuming building material. Limestone's abundance in these parts is matched only by its variety. There are unique limestones, such as post-rock, prairie shell, tuxedo gray, honey-toned, and silverdale.

But the grand dame of all the limestones is Cottonwood. Quarried in the heart of the Flint Hills, Cottonwood can likely be found in every town in Kansas. That's because, according to Kelley, not only is it locally sourced, but also it's durable. "As you're trying to create a shelter or monument, you're looking for materials that will hold up," he said, citing historic wood structures that failed to survive disastrous fires. "Limestone is one of those materials that is fireproof, durable. You could end up shaping it and creating buildings that have character and appeal. It's something that's seen

as a wonderful advantage and utilized throughout the history of Kansas.”

Cottonwood, a light-colored limestone, was celebrated and championed by one of the state’s earliest architects, John G. Haskell. Surprisingly, the stone quarried today is as consistent as it was in the 1870s. And while Cottonwood was Haskell’s stone of choice throughout his career, from the Chase County Courthouse to the Douglas County Courthouse, it’s the Kansas State Capitol that is his claim to fame and put limestone on the map. “This material, as a building resource, has had such a tremendous influence,” said Kelley. “Whether or not you’re an architect, you see the Kansas Statehouse, and all of a sudden, you’re not thinking about what’s happening today. You think, ‘How did the craftspeople do this?’ That goes back to the connection of the history of Kansas today and what we can become in the future.”

That connection to history is quite storied, as limestone has served us more than we realize. In fact, thanks to limestone, the Flint Hills are home to the largest intact tallgrass prairie in the nation. That’s because outcroppings of limestone made farming impossible in the highlands, so the prairie was spared. According to the National Park Service, 170 million acres of tallgrass prairie in North America have been reduced to just four percent of that today, with the majority preserved here in the Flint Hills.

But where did all this limestone originate? Kansas as we know it today was once the Permian Sea, a shallow body of water rife with sea creatures that absorbed calcium carbonate from the water to form shells or skeletons. These organisms fell to the ocean floor after they died, and with time the decay and calcium carbonate formed the limestone we have today.

Back on dry land, we take a closer look at the Kansas State Capitol and the connection to its diverse landscape. Haskell was responsible for its design and oversaw construction of the earliest portion, the east wing, while the body of the building was built in another lesser-known Flint Hills stone, Junction City limestone. Haskell wanted to use Cottonwood, but the logistics of quarrying and delivering large blocks of stone from Chase County to Topeka were beyond the means of the young state’s economy and infrastructure. Only the modillions under the eaves of the newly completed wing were made of Cottonwood because smaller blocks of stone were more easily transported.

Erasmus T. Carr designed the second phase of the Kansas Statehouse, the west wing, constructed entirely of Cottonwood. By the end of the 1870s, when construction began, Cottonwood could be obtained in large blocks, and new transportation networks allowed delivery to Topeka. “The Kansas Capitol was built during a time for healing,” said Kelley, speaking of the



Construction of the State Capitol
kansasmemory.org, Kansas State Historical Society

period after the Civil War. “The founding fathers were looking for a symbol of democracy. That symbol is so important. And if you have natural building materials, like Kansas had limestone, you want to use it with pride.”

The Statehouse stone was handcrafted by immigrant stone masons using traditional techniques to shape blocks of rock with chisels and mallets. The evidence of this handwork is the richly patterned faces and edges of even the humblest ashlar stones. Taken as a whole, the stones appear uniform, but upon closer inspection, subtle differences in the angle and rhythm of the tooling reveal the different hands of the makers. Various patterns of fossils form the unique natural palette with which each mason worked.

By the turn of the twenty-first century, repair projects of increasing frequency

were failing to address deterioration of the stone on the Statehouse. A comprehensive stone restoration was envisioned, a restoration that would address the causes of deterioration and renew the impressive stone edifice. This undertaking would eventually entail replacement or partial replacement of more than 5,000 of the 26,500 stones on the façade, a project that would take four years to complete.

Limestone, formed by the remains of a prehistoric ocean bed, uniquely grounds the Statehouse. This place was once a sea of water and then a sea of grassland, this place we call Kansas.

This place we call home.

Amy Dvorak is an architectural writer and serves as communications manager at TreanorHL, a Kansas-based architecture firm specializing in historic preservation.



Heilagt Landslag I
Levi Robb

STONE AND ARCHITECTURE IN THE FLINT HILLS

The lure of cheap land, fertile fields, and prime grazing acreage attracted many early settlers to the rolling Flint Hills.

New arrivals soon discovered the area's hidden wealth: abundant outcroppings of stone that could be used for long-lasting and good-looking homes, public buildings, barns, and fences.

During the Permian period of the Paleozoic era (some 250 to 299 million years ago), the Flint Hills region, extending from Nebraska to Oklahoma, had been part of a shallow sea. Gradually, calcium carbonate accumulated, formed from decomposition of marine organisms and chemical precipitation. Over millions of years these sedimentary deposits hardened into vast formations of limestone.

In 1894, eminent Kansas geologist Charles Prosser named one of the most durable and desirable formations Cottonwood limestone. He found it in abundance along the Cottonwood River in Chase County, the Neosho River in Morris County, and in Wabaunsee County. Local quarry operators sometimes referred to this formation as Alma or Manhattan limestone. It was light gray or buff in color, had an average thickness of about six feet, and often contained chert. It could be cut into workable blocks from three to five feet in length. Stone masons found Cottonwood limestone strong and resistant to weathering. As a result, many buildings and bridges constructed with it have endured for nearly 150 years with only minor repairs.

In the Flint Hills region, workable Cottonwood deposits extended from southern Chase County to Wabaunsee County. These quarries were important to the economy of the area. In the late nineteenth century, Cottonwood limestone would become

the most important source of building stone in Kansas. Even in neighboring Lyon and Greenwood counties where other formations were frequently used, limestone quarries were central to building and construction. Quarries created thousands of jobs, diversified the regional economy from farming and ranching, and contributed to the development of the national rail transportation network.

The well-known Beecher Bible and Rifle Church in Wabaunsee is an early example of Cottonwood limestone construction. In 1862, abolitionist emigrants from New England used local limestone to construct this Congregational church named for Henry Ward Beecher. This sturdy church is still used for services.

Two other excellent specimens of early Flint Hills construction with Cottonwood limestone are found in Council Grove, Morris County. There in late 1850, a twenty-five-man construction crew quarried, hauled, and fitted stone blocks to make an attractive, eight-room mission and school for Native American boys from the Kaw tribe. The famous Last Chance Store on the Santa Fe Trail in Council Grove was also built from Cottonwood limestone in 1857.

The Chase County Courthouse in Cottonwood Falls is one of the most beautiful examples of Cottonwood limestone construction in public buildings. Completed in October 1873, it features a

French Renaissance style (Louis XIII) with a mansard roof and a cupola. It stands 113 feet from ground to top of the flagpole and has a two-story, black walnut circular staircase. The building is recognized as one of the architectural wonders of Kansas and is the oldest operating courthouse in Kansas.

Many of the stonecutters who came to Chase County to work on the courthouse remained to work on other stone projects and to develop the area's quarries. David Rettiger built the house and barn of the Spring Hill Ranch, now on the Tallgrass Prairie National Preserve, for rancher Stephen F. Jones in 1881. The home, constructed on a bluff in the Fox Creek valley, also has a mansard roof and dormer windows. It reflects some of the same Renaissance influences exhibited on the courthouse. Rettiger also constructed schoolhouses and office buildings in the area, including the Lower Fox Creek School on Highway 177 north of the Spring Hill Ranch.

After the Civil War the growth of the nation's rail network created a strong demand for limestone and incentives for quarry operators to expand. The Atchison, Topeka, and Santa Fe Railroad reached Chase County in 1871, and within twenty years it extended from Chicago to the Gulf and West coasts with connections to the Mexican Central Railroad.



Horizon Stone
Bill McBride

Much of the Santa Fe construction was done by Barnaby "Big Barney" Lantry. He came to Chase County in 1877 from Wisconsin where he had been building railroads. An energetic businessman, Lantry soon became the leading Kansas shipper of stone products. He produced limestone for construction of the Santa Fe Railroad to El Paso and expanded his business to include stone bridges, railroad stations, and roundhouses. In 1879, the press reported that he had become the largest contractor in the West.

Lantry and his sons built the cog railway up Pikes Peak; erected the famous

Montezuma Hotel in Las Vegas, New Mexico; and even remodeled the area around San Francisco Bay to facilitate the transfer of ocean freight to rail cars. The firm also constructed the Mexican Central Railway from El Paso to Mexico City. In many projects Lantry used Chase County workers and Cottonwood limestone. At the time of his death in 1895, Barney Lantry was considered the richest man in Kansas.

Another Chase County quarry owner, Phil Santy, constructed the gracefully proportioned, twin-arch limestone bridge across the Cottonwood River at Clements. Although no longer in use, the bridge,



Stone Bridge and Sapling
Gary Gackstatter

finished in 1888, is considered one of the most beautiful limestone bridges in Kansas. Still intact, it spans 175 feet over the Cottonwood River, rising forty feet above water level, and is ten feet wide. It is a masterpiece of design and construction.

Chase County quarries also supplied Cottonwood limestone for the south and west wings of the Kansas State Capitol in Topeka, the Memorial Campanile at the University of Kansas, and the Eisenhower Presidential Library at Abilene.

In Wabaunsee County the railroad boom occurred a decade later in the mid-1880s. The arrival of the Chicago, Kansas, and Nebraska Railroad, a subsidiary of Rock Island, produced a surge in building construction and quarry expansion. John Joseph Fox, an Iowa railroad contractor, developed a large quarry southwest of Alma and employed seventy-five to one hundred men cutting stone for rail stations and bridges across Kansas, Nebraska, Oklahoma, and Texas.

Cottonwood limestone was extensively used in reconstructing downtown Alma. The Brandt Hotel (1887), completed to accommodate railroad workers and travelers, is an example of Italianate architecture applied to a commercial building. The Limerick block (1888), done in Romanesque style, contained the city hall. By 1891, local newspapers described Alma as the “City of Native

Stone.” One even hailed it as the “Queen City of Kansas.”

Native limestone was used to construct two small bridges on the east and southeast sides of Lake Wabaunsee and many of the dry-land rock fences that dot the rolling countryside. Settlers of German ancestry used the Cottonwood limestone outcroppings to build beautiful stone fences and durable homes and barns for their stock and storage. Travelers can still find attractive stone fences and buildings along Mill Creek southeast of Alma and on the Native Stone Scenic Byway in Wabaunsee and Riley counties.

Late in the nineteenth century, barbed wire and Portland cement would replace limestone in many uses, but present-day visitors to the Flint Hills can find many long-lasting, elegant buildings and bridges constructed from the beautiful limestone of the region.

Alfred E. Eckes, Jr., PhD, is Eminent Research Professor Emeritus in History, Ohio University, Athens.



Strata Terra 1
Laura Berman

LUCAS KOCH, STONE MASON

*I have found what I love to do, and I have
found a way to make a living doing it.*

Lucas Koch

The Flint Hills is home to a number of stone masons, but Lucas Koch, owner of Koch Construction Specialties, is one of the most passionate about the craft. In addition to creating beautiful stone structures, Koch has worked hard to keep stone masonry alive. He helped organize the 2017 Flint Hills Stonework Symposium and Workshops, is now certified by the Dry Stone Conservancy to teach dry stone walling classes, and works side by side with his employees to teach them his craft.

How and why did you become a stone mason?

I have always felt that my earliest interest in stonework started when I served as a park ranger at Tallgrass Prairie National Preserve. I was surrounded by the historic stone buildings and walls. I was fortunate to be able to watch National Park Service masons do restoration work on the Lower Fox Creek School. During this time I felt a strong urge to buy an abandoned stone house south of Cottonwood Falls. After working months alongside masons from Emporia on our home, I learned many of the basic principles of restoration and stone construction. Shortly after completion of our home, local folks began to ask if I would work on their stone structures. Hence in 2000, my business began.

How did you learn the craft of stone masonry?

I learned much of my craft by trial and error. However, I researched books and learned from other masons that worked for me. The most valuable experiences came from participation in workshops and symposiums led by master masons around the country. I have attended twelve stone masonry workshops out of state. I communicated with a network of stone masons around the country and Europe. Several of these masons have traveled to Kansas and helped with a few of my projects.

What drew you to the stone masonry business?

I have always loved the old crafts. I did woodworking and blacksmithing at one time as well. The Flint Hills offer a great opportunity for stone masons. I like the fact that the techniques for building with stone are not going to change much; it's one of the oldest trades in the world. I shape and work stone with chisels and hammers much like the Romans. The connection to history and preserving these techniques, I feel, is what appeals to me the most.

What is your staff size?

I currently have a crew of seven, including me. The number changes seasonally, with more employees in the summer than

winter. High school and college students are employed in the summer months when the workload is heaviest. At times I have hired masons temporarily to help with bigger projects. The crew is mostly Chase and Wabaunsee county residents; however, the foreman lives in Topeka and commutes to the Flint Hills. My family also helps with the business. My wife, Susan, is business manager; my oldest son, Tanner, works with the crew in the summer; my daughter, Laura, helps with painting letters on signs; and Bryson, my youngest at twelve, is too young to work with the crew but has been carving stone since he was nine.

What does a typical day look like?

Most days begin at 7 a.m. If mortar is needed, it is mixed as soon as possible. The crew can use ten to twenty batches of mortar in a day. Masons organize the worksite by getting the proper tools and stocking stone. Building and stone shaping consume most of the day. After lunch the masons begin to strike the mortar joints from the morning's work. A wire brush is used to smooth and refine the joints for a final finish. This can only be done after the mortar is set. At the end of the day, materials are stocked for the next day. In the summer we work four ten-hour days; this allows for a make-up day if needed due to weather. In winter we work five eight-hour days.

What is a typical project?

Throughout the year we usually do several restorations on 1880s-era buildings. This may involve tuck pointing, rebuilding failed walls, or replicating broken lintels. There is usually some new construction such as veneer on houses, fireplaces, or stone patios. We also do a lot of dry stone projects, which involves stonework without the use of mortar. These typically are retaining walls or stone fences. Lastly, we also carve letters into signs.

What projects are you most proud of?

I am really happy I got to build a dry stone arched bridge. It is located just north of Matfield Green along Bill McBride's sculpture path. I am not aware of other dry stone bridges in Kansas. We built two root and wine cellars; they are subterranean with an arched ceiling. I enjoy the process of building arches.

Are you especially careful about keeping your work historically correct?

I am very concerned with keeping our work historically correct. In restoration projects I will match the historic mortar's color, sand, and texture to make seamless repairs. In dry stone construction, I follow a very specific design to ensure the walls will stand for a century.

What is your most visible project in the Flint Hills?

In 2017, I organized the Flint Hills Stonework Symposium and Workshops in Cottonwood Falls. Masons and carvers from fifteen states and seven countries converged to build an artistic courtyard for Citizens State Bank in downtown Cottonwood Falls. It has become a meeting place as well as a backdrop for countless photo shoots. Tallgrass Prairie National Preserve is the site of one of our most visible projects. Koch Construction Specialties was hired to work with Dry Stone Conservancy of Kentucky. We built a stone fence that flanks the entrance to the visitor center. The stone fence is 835 feet long.

How is your headquarters in the Flint Hills important to your business?

Living near Cottonwood Falls has put me geographically in the center of the Flint Hills. This puts me within one to two hours of most projects. I also have a house in Alma that allows me to be within minutes of the bulk of my work in Wabaunsee county. Most of the stone used in our projects is quarried in Chase or Wabaunsee counties. Occasionally we have special projects outside of the Flint Hills, such as the restoration of the Wilson Czech Opera House in Wilson. I have also done several great projects in Kansas City.

Where does the stone come from for your business?

I am fortunate to have a great selection of limestone throughout the Flint Hills. Many quarries supply cut stone and blocks. I also salvage stone from fences and dilapidated structures. Many projects in rural areas have the stone that is needed on the property; this can produce a perfect match.

What would surprise people about your business?

I often plan projects several years in advance. Typically, the crew has a solid year of work lined up. Fortunately, weather and construction schedules offer the flexibility to work on smaller projects.

How important is passing on your knowledge?

I realize that my trade will die if it isn't shared or passed on. The era of son learning from father who learned from his father is nearing its end. I train my crew by working side by side with them. My seasoned crew does a good job of helping to train the new recruits. I recently became certified to teach dry stone walling classes from the Dry Stone Conservancy, and I hope to organize a workshop for the Kansas region soon. For the Flint Hills Stonework Symposium and Workshops in 2017, four international instructors taught carving, sculpture, dry stone masonry, and architectural fabrication in stonework. I

have presented at four international Stone Symposiums, at Symphony in the Flint Hills Signature Event, and for local civic groups and schools.

What special recognition has meant the most to you?

I competed in the National Dry Stone Walling Competition several times. I placed first in the Professional Division in 2017 and third in the Master's Division in 2019. I was excited to receive a 2019 Historic Preservation Building Award by the Manhattan and Riley County Preservation Alliance for our work on St. Paul's Episcopal Church in Manhattan. I am honored to have worked with Kansas State University's fifth year architecture students and their Design+Make studio course at Camp Wood YMCA. Our project was the Preston Outdoor Education Station, a unique stone feature constructed and designed by my crew and students. The students received honors from *Architect's Newspaper*, *Azure Magazine*, and the ACSA Design Build Award.

What would you like your legacy to be?

God has each of us here for a specific purpose. I have felt that I was guided through life by events and people along the way that brought me to this career. I have found what I love to do, and I have found a way to make a living doing it. I would like to be remembered as honest



Dry Stone Bridge on Bill McBride's PrairieArt Path
Matthew Regier

and good to those I work with. I want my work to be thought of as beautiful, solid, and timeless. I also hope that the craft I practice honors the masters that perfected stonework through time.

Why are you passionate about keeping the stone heritage alive?

I feel the Flint Hills offer many things to people. Elements that are appealing to us are prairie, wildlife, Native American history, the ranching tradition, and architecture. The complete story of the Flint Hills does not exist without the stone in the hills and the topography created by the stone outcrops and layers. The stone and flint prevented the conversion to farmland, allowing ranching to dominate.

The limestone has created nutrients for the grasses and water that are superior for grazing. Native American tribes hunted here for centuries; now ranchers reap the benefits of fattening cattle on the same hills. Lastly, the building material of choice was stone for early settlers. The stone architecture is one of the most recognizable cultural landscape features in the Flint Hills. The craft is appreciated here. People stand in awe of the work that was involved to build the houses, barns, churches, courthouses, and even the miles of stone walls. I often wonder if I didn't work on these structures, who would? Ultimately, I wouldn't be able to do this work without the great customers that hire us and keep us busy.

STONE CELLARS

Mill Creek Township in Wabaunsee County is in the heart of an area with a high concentration of arched cellars. Three wonderful examples of the caves are found within just a few miles of each other. Their location names are derived from early deeds and plat maps.

Tom Parish earned his Master of Fine Arts in Photography and Digital Art from Kansas State University. He teaches Graphic Arts at Flint Hills Technical College in Emporia.



John Olson Dugout
Tom Parish

JOHN OLSON DUGOUT, MILL CREEK TOWNSHIP, WABAUNSEE COUNTY

This mysterious structure and associated compound of buildings doesn't appear on any of the early plat maps. The earliest record of property ownership indicates that it dates from the late 1880s. No residence on the property is indicated, just a landowner's name. It seems probable this site would have been settled well before 1880.

(Note: This is a 360-degree image, showing both the front and back of the arched cellar, as is the next image.)



John Siegrist Root Cellar
Tom Parish

**JOHN SIEGRIST ROOT CELLAR,
MILL CREEK TOWNSHIP, WABAUNSEE COUNTY**

This arched cellar is less than a mile from the John Olson cave; however, they were likely built by two different masons a decade or more apart. The cave itself is built into a hillside behind the remnants of a two-story stone house located about a quarter mile north of a Swedish cemetery. The structure walks out to the south via a short-arched antechamber into the back of the house. The house is quite striking and so is the intricate coursing in the stone of the cellar walls. The house burned down during the 1950s. This site is above a beautiful draw.

Jasper Seery Root Cellar
Tom Parish

**JASPER SEERY ROOT CELLAR,
MILL CREEK TOWNSHIP, WABAUNSEE COUNTY**

This arched cellar is located near the southeast corner of Mill Creek Township. There are stone remnants of other building foundations, but otherwise little is left of the homestead. The ground around the cave has been allowed to erode for years, to the point that the entryway and back wall have started to collapse, providing a cutaway look at the construction of the cave. The cave opens directly south and features a rare arched entryway. The cellar would have opened into the back of a house.

NATIVE STONE SCENIC BYWAY

The Native Stone Scenic Byway highlights both the natural wonder of rock formations and the amazing craftwork of masons who built the small towns, homes, barns, and fences with native stone. The seventy-five-mile rural route meanders southeasterly from Manhattan to the tiny town of Dover near Topeka. Informative kiosks tell the historic highlights at byway pull-offs. Follow along the prairie path:



1. DOVER

Dine at a former 1800s general store, known for its home cooking. Across the street the historic 1878 Sage Inn, listed on the National Register of Historic Places (NRHP), served as a stagecoach stop.

2. ECHO CLIFF

Fifty-foot cliffs tower above babbling Mission Creek and its shady, outsider-art picnic areas created by Earl Hepworth.

3. ESKRIDGE

In “The Gateway to the Flint Hills,” NRHP sites include the downtown’s 1906 Security State Bank and the city park’s 1908 bandstand.

4. LAKE WABAUNSEE

Homes line the pretty shores of this 235-acre, spring-fed lake, the “Gem of the Flint Hills.” View the all-encompassing byway kiosk near the lake entrance.

5. HIGHWAY 99

Watch for stunning stretches of limestone fences, turn-of-the-century homes, and barns through cattle country south of Alma. A kiosk near the intersection of Highways 99 and 4 tells the ranching story.

6. ALMA

This “City of Native Stone” boasts a showpiece 1930s courthouse and a treasury of downtown historic sites.

7. MOUNT MITCHELL HERITAGE PRAIRIE

Mount Mitchell Heritage Prairie Park, a part of Freedom’s Frontier National Heritage Area, recalls its American Indian, abolitionist, and Underground Railroad ties. Hike to the mount for a valley view beyond.

8. WABAUNSEE

At the Wabaunsee townsite, read about its Underground Railroad days and its still-remaining stone 1862 Beecher Bible and Rifle Church, named for a fiery abolitionist minister.

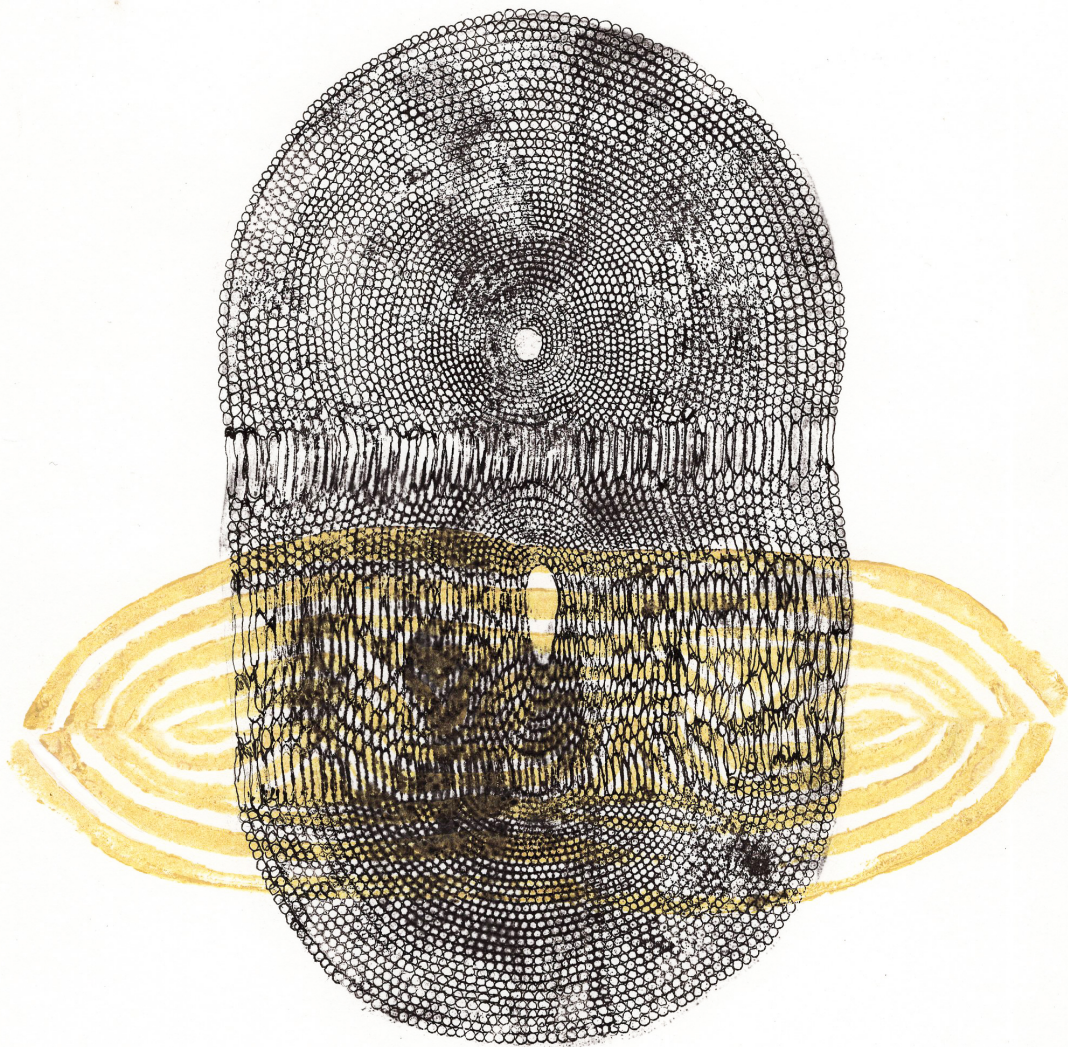
9. PILLSBURY CROSSING WILDLIFE AREA

Seven miles southeast of Manhattan, soak up the scenery at this stone-bottomed crossing on Deep Creek and its broad waterfall.

10. KONZA PRAIRIE BIOLOGICAL STATION

Hike the trails at this 8,600-acre tallgrass prairie research area or get a pretty prairie preview at the Highway 177 scenic overlook.

Mary Mertz serves on the Native Stone Scenic Byway Committee. The 1860 limestone home in which she and her husband, Bob, reside was recently added to the Kansas Registry of Historic Places and is situated on the byway near Zeandale.



NATURE

*We abuse land because we regard it as a commodity
belonging to us. When we see land as a community to which
we belong, we may begin to use it with love and respect.*

Aldo Leopold, Foreword, *Sand County Almanac*

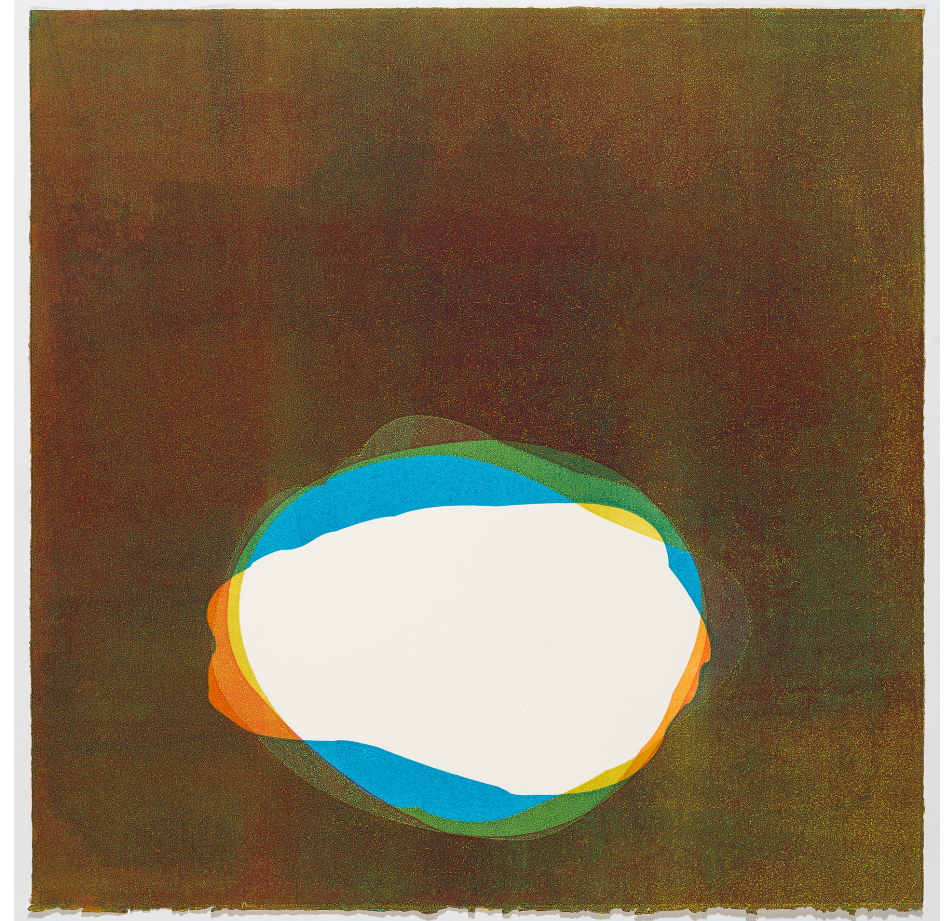
OPPOSITE PAGE

Goldenroot
Ruth Loveland

ROCK SOLID

What forces forged the Flint Hills that we know and love today? What are those flinty rocks made of? How has stone influenced the Flint Hills economy? And how has the character of the land influenced the Flint Hills' signature activity, cattle grazing?

To find some answers, pull on your work gloves, grab your shovel, and prepare to dig deep with the region's geologists, ranchers, and stone crushers to understand the natural history of the Flint Hills and its influence on human activity, both past and present.



Coronae 7
Laura Berman



Ha Strata
Hannah Bennett

IN SEARCH OF DEEP TIME

Time is tricky. It can move fast or slow. Time can heal. It can make the seemingly impossible into the possible. Here's proof. Go back, maybe 280 million years, to Wabaunsee County. Things would look very, very different.

Two hundred eighty million years ago, you wouldn't be standing in a pasture or see any of the animals around you today. You would, more than likely, be paddling on a shallow sea. The air would be warm, probably humid, more like today's Florida coast, because you'd be closer to the equator. The sea below you would teem with life: worms, clams, fish, sea urchins, corals, trilobites, and countless critters that flourished in that shallow, warm seawater.

That long-ago environment seems completely at odds with land-locked pasture today. But that ancient environment and the intervening pageant of time combined to produce the landscape around you now.

But what does 280 million years really mean? How do you envision a sweep of time so vast, so beyond our day-to-day thinking? At best, most of us experience only a few decades. And people have been recording history for only a few thousand years.

People who ponder much older events talk in terms of "geologic time" or "deep time," not decades or centuries. Deep time is the concept that William Least Heat-Moon considered in his big Flint Hills book, *PrairyErth*. He subtitled the book "a deep map," playing with the ideas of deep time, the deep subsurface, and deeply knowing a subject.

Deep time can change the inconceivable into reality. In deep time continents move, the way that the continental plate we're sitting atop has drifted from close to the equator to today's

location. Mountain ranges rise, the way the Rockies were uplifted to our west. Layers of sediments slowly accumulate on an ocean floor, then harden into limestones and shales, the way they have here.

Deep time lets species morph from one form to another or disappear, leaving their remains in the rocks around us. Over deep time erosion, mainly from falling water, can carve gullies, sculpting these hills.

Because deep time is so hard to apprehend, geologists have developed analogies that compare time to things we can understand. One analogy likens geologic time to a football field.

The earth is roughly 4.6 billion years old. If geologic time starts at one goal line, the first evidence of life shows up on the twenty-two-yard line (about 3.5 billion years ago). You must go sixty-six more yards, all the way to the twelve-yard line at the other end of the field, before shelled animals show up (at 570 million years). Fish appear at the eleven-yard line, amphibians on the eight, and reptiles on the seven-yard line. The rocks around us were deposited in a period called the Permian, which would fall between the seven- and six-yard lines. Dinosaurs show up at the five; mammals at the four; and the first humans, incredibly, just 1.5 inches from the goal line.

Analogies like this, and much of the information they are based on, were developed by geologists and paleontologists. It's sometimes said that earth scientists

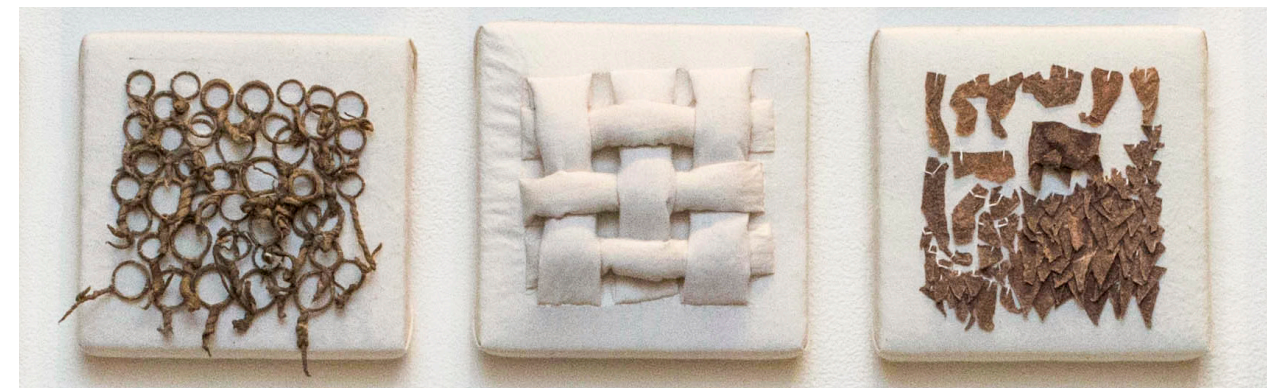
can envision deep time, think in those long periods, better than most people. In a famous essay, the ecologist Aldo Leopold wrote about "thinking like a mountain." He contemplated events that mountains witnessed, events that people weren't around to see. When geologists try to imagine geologic time, they're trying to "think like a mountain." Earth scientists, some people claim, can picture millions of years and billions of sunrises and sunsets.

I'm not so sure. I've worked with geologists for decades. In spite of analogies or fossils or the constant contemplation of Earth's whole history, many don't seem to comprehend a million years any better than most people.

But here's what they can do: geologists can picture worlds unseen.

They understand that this place would look very different, depending on when you were here. They know that a billion years ago, igneous and metamorphic rocks formed an ancient mountain range. Those mountains (still present only a few hundred feet below us) are now covered by sediments left behind by later oceans, like those Permian seas.

Geologists can picture those ancient oceans, and they know that even after the water receded, erosion and deposition continued inexorably on, washing small channels into the rocks here, channels that today conduct water to springs or even form caves. Geologists know that in



Ha Strata (detail)
Hannah Bennett

places erosion removed the softer rock, like limestone, and left behind harder, tougher stone, like the flint (or chert) that gives its name to these hills.

Geologists know that much more recently (a mere 600,000 years ago), thick layers of ice pushed down from the north. And although those glaciers didn't get this far south, they did rearrange the landscape, creating the Kansas River and leaving behind rocks and other debris they carried with them. Geologists know that big mammals, such as mammoths and camels and giant bison, bigger than the ones we see today, walked the ground of the Flint Hills.

Geologists know that in time, lots of things are possible. And geologists aren't the only ones.

William Least Heat-Moon wrote about that, too, in *PrairieEarth*: "Before the

children of Europe took these hills, the people who walked here believed stones to be alive because they carried heat, changed their forms, and moved if you watched long enough."

Here's a caveat. Even with long expanses of geologic time, not all geologic events happen slowly. Volcanoes, earthquakes, floods, maybe even climate change, all happen suddenly, sometimes catastrophically. Even evolution is not some long, smooth process. Paleontologists developed the idea of "punctuated equilibrium" (known as "punc eq" in some scientific circles), the notion that evolution occurs in fits and starts, sometimes quickly, and at other times hardly at all.

When humans arrive, they demonstrate again that things can change quickly, evolving, rearranging the earth. But only in that last 1.5 inches. For all the rest of

time, for all of the 99.9 other yards on the football field, no people were present. No human eyes watched the sun rise and set or saw the animals who lived here or watched those geologic conditions change. We might picture ourselves at the center of the universe, but for nearly all of geologic time, we were nowhere to be found.

In much the same way, people once pictured the Earth as the center of the universe. They thought that the sun and the other planets revolved around us. Then, with the realization that the Earth moved around the sun came the understanding that we were just another planet, not quite as special, not quite so central.

An appreciation for geologic time has something of the same effect, I think, on the people who ponder these things. They easily imagine a world with fantastic forms of life that come and go, mostly with no people present.

None of this makes geologists appreciate people any less. In fact, because people show up so late and play such a small role in geologic history, some geologists appreciate how rare and wondrous humans, and many other forms of plants and animals, really are.

In his book *Wonderful Life*, paleontologist Stephen Jay Gould analyzed the idea of historical contingency. That's the idea that history didn't have to unfold the way it did. With long periods of time to

work in, all sorts of historical possibilities are out there.

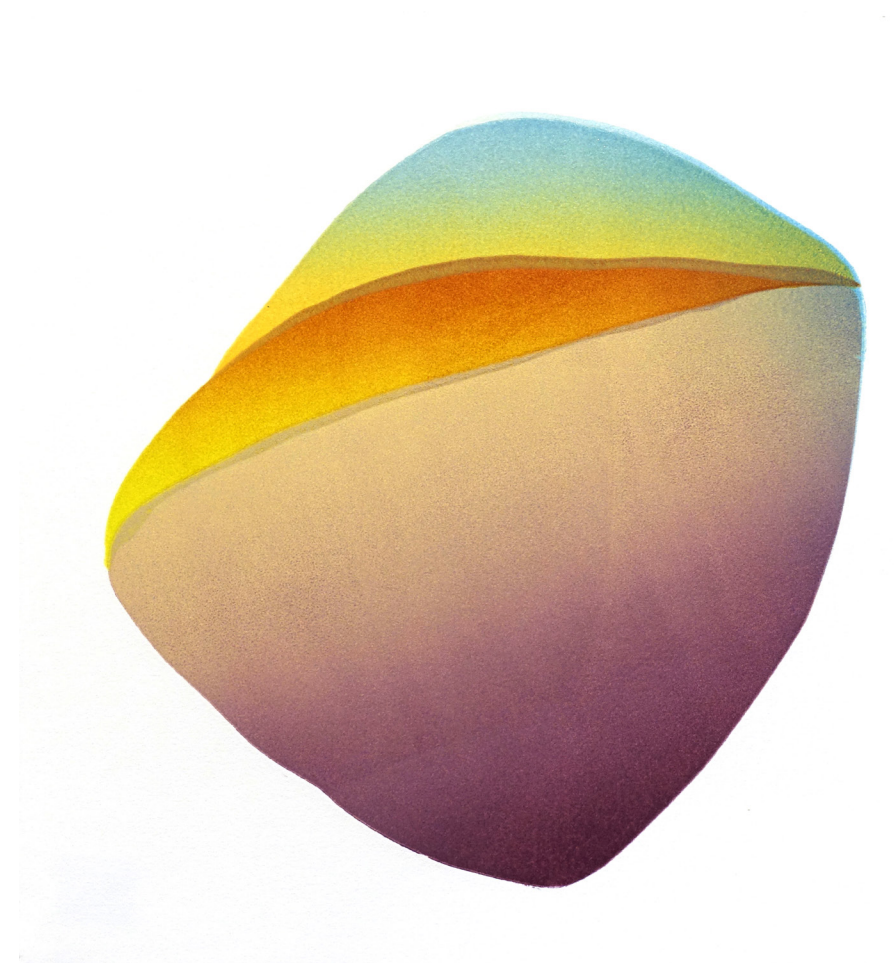
Like the movie that provided the book's title, Gould contemplates what might happen if the tape of time were rewound, played over again, with a change or two. And the cool thing about geologic time is this: it makes all sorts of things possible. A shallow sea becomes a pasture. Swimming animals give way to gently waving grass. People walk where camels once wandered.

At the end of the Permian Period, about 250 million years ago, a great extinction took place all over the world. About ninety-five percent of marine species disappeared, and about seventy percent of land-based species went away. It was a much more dramatic extinction than the one at the end of the Cretaceous Period that wiped out the dinosaurs.

And yet, after each of those extinctions, life recovered. Flourished even. All sorts of different plants and animals appeared, including, eventually, people.

All it takes is time.

Rex Buchanan is the Director Emeritus of the Kansas Geological Survey. He is the co-author of *Petroglyphs of the Kansas Smoky Hills* and *Roadside Kansas*, and editor of *Kansas Geology*. (University Press of Kansas)



Gem
Laura Berman



The Evening Crew
Scott Bean

GRAZING PLANNING, THE CORNERSTONE

Standing upon a hilltop in the Flint Hills of Kansas and peering across the tallgrass prairie landscape is an extraordinary experience.

The hike to obtain such a view likely involves careful steps over and across steep, stone-covered slopes. The stones that are traversed to obtain such a view are the very stones that kept the plow from eliminating this prairie landscape.

Livestock grazing in lieu of crop production became the dominant enterprise among settlers from Europe because of this stone. Barbed-wire fence is the main means of controlling livestock in the Flint Hills. While many are thankful for the stone that kept the plow away, ranchers and those who contract to build fence may have a differing view. Never is there such disappointment in a rancher's face as when the post hole digger scratches and hops after making it only a foot deep. The realization that a couple more feet of depth will be needed to properly set a corner post is a tough one. It means hours of work with a bar or having expensive equipment to take on the job. The reason they accept the challenge is because this stone-covered landscape provides diverse, nutritious forage for their livestock and because they desire to remain good neighbors and control their animals.

With the fence comes a subdivision to the landscape. No longer are the native grazers accessing this vast landscape and being influenced by hunting or herding, droughts, and fire. The fence now defines the spatial extent of grazing that can occur. The rancher now determines the frequency and extent of intentional fire, the density of grazing animals on the landscape, and the season those grazers will be present. The fenced landscape requires a highly

skilled manager to establish site-appropriate stocking rates, monitor the flora, and fauna, and make critical management decisions so the pasture remains a healthy, functioning prairie.

Site-appropriate stocking rates must be the cornerstone of the ranch's grazing management plan. Averages are a good starting point for decision making in any business, but one must realize that a lot of highs and lows go into making an average. If pasture production is higher than average and an average stocking rate is used, the rancher could miss out on potential income from increased livestock numbers. On the flip side, when pasture production is less than average but an average stocking rate is used, negative impacts to prairie health can result. In my twenty years of inventorying and assessing rangeland, I've yet to find that "average" pasture. Recognizing the variability among fenced pasture is the key to developing site-appropriate stocking rates. Obtaining a forage inventory by pasture is a keystone step in the process.

The key difference among fenced pastures is the soil types that can be found within the fence. While many fence lines are straight and square, soil lines often follow contours and are anything but straight and square. For management purposes, soil types are grouped into units called ecological sites, a distinctive kind of land with specific soil and physical characteristics that differ from other kinds

of land in its ability to produce a distinctive kind and amount of vegetation and its ability to respond similarly to management actions and natural disturbances. Parents of multiple children can easily relate to this concept. Each child is unique and responds to instruction and discipline differently. They also each have unique skills and abilities. You know from experience that you couldn't use the same parenting technique on all the children or expect them to all do the same thing. The same goes for the various ecological sites and their ability to produce forage; sustain plant diversity; and respond to grazing, fire, and variable weather.

Resource guides known as ecological site descriptions (ESDs) have been developed to inform ranchers and land managers about the unique characteristics of the site; the plants that can be expected to be found on the sites; and how management could affect the soils, hydrology, plants, and wildlife on the site.

Utilizing ESDs, ranchers and land managers optimize their knowledge of potential plant communities, how past management has developed a current plant community, and what management practices could be used to turn a plant community that is only surviving into one that is thriving. Pastures rarely have only one ecological site present within the fenced boundary. The forage inventory considers each of the sites present in the



Stone Fence Post
Gary Gackstatter



Forgotten Farmer Fence
Mark Feiden

pasture, the unique plant community present on each site, and each site's specific ability to produce forage. With this information in hand, the rancher can design a grazing plan to enhance the productivity and health of the prairie plant community with livestock.

Livestock demand varies based on the type and size of the livestock, stage of growth, and length of time livestock will be present on the pasture unit. Cow/calf, stockers, sheep, goats, horses, or bison and full-season, short-season, or year-round grazing are among the variables with livestock type and length of season (time). Knowing and controlling these variables will dictate the amount and types of vegetation that are consumed and the long-term impact to those plants that are most desirable to the grazing livestock.

Like the visitor traversing the path to that hilltop view, the rancher carefully and skillfully implements the grazing plan. With a landscape view in mind, the rancher's path to achieve it often isn't predictable. Droughts, floods, wildfire, invasive plants, and shifts in livestock markets can quickly alter the steps taken. By navigating the site and situation variability and adjusting livestock forage demand accordingly, the rancher and land manager can positively sculpt the flora on the tallgrass prairie landscape.

It's estimated that less than four percent of the pre-settlement acreage of tallgrass

prairie remains and that a majority of that remaining amount is concentrated in the Flint Hills. Human nature often leads us into taking for granted those things we have in abundance. Locals could easily become immune to the views this prairie landscape provides. The local abundance could even callous a response to degradation or loss of additional acres. Thankfully, many ranchers and land managers understand the regional rarity of this ecosystem. Their management incorporating prescribed fire and a site-specific grazing plan, along with the stone that evaded the plow, affords us the opportunity to peer across a healthy and diverse tallgrass prairie.

Doug Spencer is a Rangeland Management Specialist assisting producers and field staff in the Flint Hills region of Kansas.



Two Rocks
Steve Snell

ROCKS OF THE FLINT HILLS

If you were in Wabaunsee County 250-plus million years ago, you'd be standing on a nearly flat surface of gooey mud.

Over millennia, this surface was sometimes covered by shallow seas, and sometimes the seas drained away so this muddy surface was intermittently exposed to the air in a tidal flat or lagoon setting. At other times, this surface was above sea level full time as a land surface.

From 290 million through 250 million years ago, this area was far from any kind of active mountain building. The ancestral Rockies were more than 300 miles to the west, and the Ouachita and Wichita uplifts were about 300 miles to the south. Here the seas rose and fell on the Craton—a nearly flat surface of ancient rocks eroded down from previous episodes of mountain building.

The entire continent began this time period very near the equator and underwent a long-term climatic change from humid to arid, coinciding with the northward drift away toward its present position. Superimposed on this general trend were regular, repeating, global-scale climatic changes that caused changes in environments, which caused changes in the types of sediments deposited. Over a span of more than fifty million years, repeated warming events raised sea levels, and cooling events caused sea levels to fall due to glaciation at the poles.

The different environments—shallow seas, tidal flats, lagoons, and subaerial land areas—supported wide varieties of living organisms. Invertebrate animals, fishes, and plankton were abundant in the shallow seas. Different invertebrates, fishes, and plants that could thrive in alternately salty and fresh water lived in the tidal flats and lagoons. Land plants and animals lived here

during their respective periods. When these organisms died, their soft, squishy parts generally decayed and were recycled into other organisms, and the “hard parts” (shells, teeth, bones) became sediments.

During the warm periods, the sediments were mostly the shells of living things that lived either floating in the water or on the seafloor itself. The majority of these shells are made of the mineral calcite. Some were large enough that you can see the fossils today—brachiopods, bryozoans, corals, fish teeth, etc. Some were shells and skeletons of tiny, even microscopic, planktonic plants and animals, which settled to the seafloor to make up a calcite mud, which geologists call (technical term coming up here ... get ready ...) ooze.

A smaller number of planktonic organisms made their shells out of silica. Silica is what the very hard mineral quartz is made of and is also the primary component of glass. These tiny critters lived in the water column and settled to the sea floor, adding to the ooze. In addition, some sponges built silica structures which also added to the ooze.

During the colder periods, when sea levels were low because water was tied up in glaciers, the sediments deposited here were mostly clays, blown here by winds from distant areas that were above sea level.

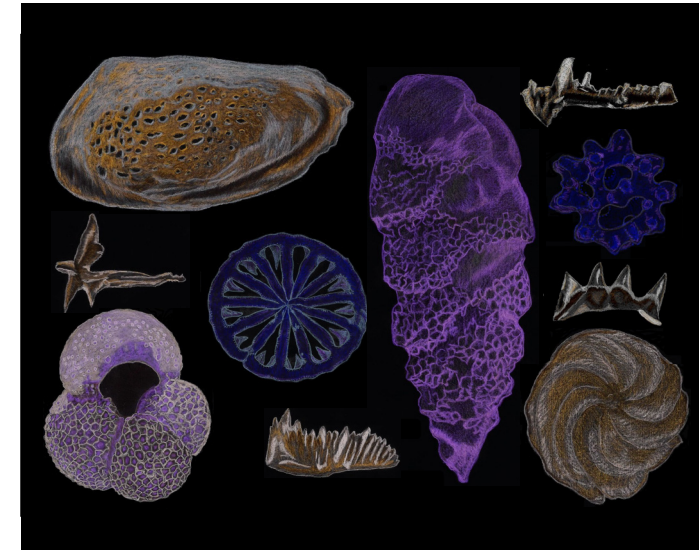
All told, we had an alternation between deposition of ooze (calcite and silica) and clays over time, and those conditions

were the same over a very large area for significant spans of time before changing again. Each of the rock layers that you can see today is a reflection of each of those periods of deposition.

As more sediments were added to the top of the pile, the lower sediments were squeezed and compressed, turning into rocks. Clay became mudrock, or with more compression and some recrystallization, shale. As the water between the sediments was squeezed out, much of the calcite and silica in the ooze recrystallized. Because calcite has an affinity for calcite, and silica has an affinity for silica, the rocks formed from these layers of sediments were mostly limestone (made from calcite) with nodules of chert (made from silica) within it.

Limestone, especially limestone with a lot of chert in it, is harder than shale, so it forms cliffs. Mudrocks and shales erode very easily, forming gentle slopes. This differential erosion causes the stair-step pattern seen throughout the Flint Hills, as modern streams erode the surface.

Although limestone is harder than mudrock and shale, it is soluble, so water can migrate through it very easily, and many limestone layers have developed caves and solution cavities. Thus, these alternating layers of rock types are also responsible for the thousands of springs found throughout the Flint Hills. Rain falling on the surface infiltrates the soil and moves down through the limestones until it hits an impermeable



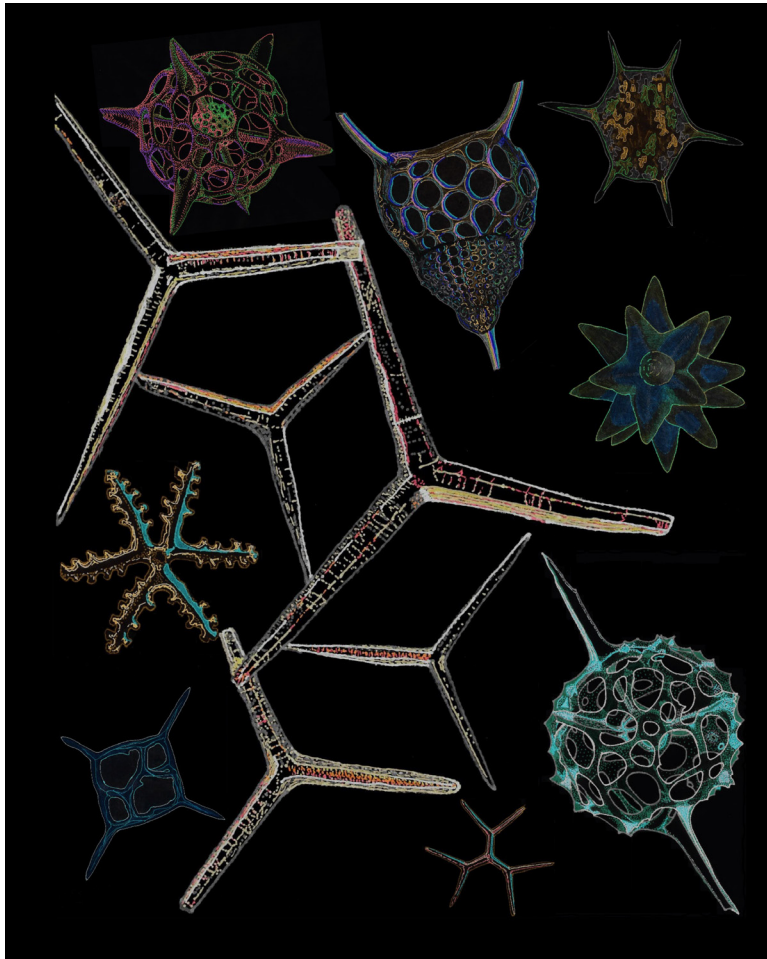
Ooze I: Forams and Friends
Tracey Graham

shale layer. The water then moves sideways above the shale until it finds a way out. This is why springs are common at the interfaces between limestones above and shales below.

The sediments that now comprise each of the individual rock layers were deposited at roughly the same time over nearly all of Kansas, Oklahoma, and Nebraska. When the climate changed, the sea level changed, so the type of deposition changed and different rock layers resulted. When the climate changed again, deposition changed again, etc.

Each distinct layer is given a name, based on where it was first described

in the geologic literature. For example, the Matfield shale that is exposed throughout much of the Flint Hills was first described near Matfield Green. The younger Barneston limestone, also exposed throughout the hills, was first described near Barneston, Nebraska. Everywhere throughout the Flint Hills, the younger Barneston limestone is always found above the older Matfield shale. Below that is the older Wrexford limestone. Above is the younger Doyle shale, and so on. Each layer is named for the town nearest where it was first identified and described but is found over a very large region.



Ooze II: Flint Hills Forerunners
Tracey Graham

Anywhere in the Flint Hills, you can read the geologic history in the topography. Each gentle slope you see formed on one of the shale layers and represents a period when the climate was cool, glaciation was strong, and Kansas was mostly above sea level. The steeper slope breaks and cliffs of limestone layers represent warm inter-glacial periods when Kansas was covered by seas. During those warm periods, calcite-forming organisms were abundant, so limestones are the resulting rocks. During some of those warm periods, conditions also favored the development of silica-forming animals, so the limestones contain significant amounts of chert. Another name for chert is flint. Flint Hills ... get it?

Over time, as limestones have dissolved, lag deposits of chert nodules were left behind. Some of the limestone layers are

particularly flinty (contain a lot of the chert), and in areas where erosion has removed the layers above those layers, we get very stony rock surfaces. These surfaces can be difficult to walk on without turning an ankle, but they have protected the Flint Hills from the plow and extensive development. So, when you are relaxing and enjoying the spectacular views of this last remnant of the once-vast tallgrass prairie, take a moment to thank the siliceous planktons and sponges of long ago for making all this possible today.

Tracey Graham earned her PhD in Earth and Planetary Sciences at the University of New Mexico. Tracey is active as a caterer, fiber artist, local food advocate, Qigong trainer, and volunteer.

A FLINT HILLS HAIKU

Siliceous sponges
And radiolarians
Keep the Flint Hills free

WARREN HARSHMAN, ROCK CRUSHER EXTRAORDINAIRE

*Applying God's principles requires a commitment to
much more than making the business profitable.*

Warren Harshman

Since the 1950s, Warren Harshman's family has excelled in the dirt excavation business. In 1978 Harshman Construction delved deeper into the rock crushing field and today operates seventeen quarries in south-central and southeast Kansas. The family firm has earned multiple awards for land reclamation efforts that follow its quarrying work. Second-generation earth and stone expert Warren Harshman details his family's Flint Hills operation.

Describe your business, what you do, and location.

Harshman Construction, with its principal office located near Cedar Point, works in the rock crushing and earth moving business.

How long have you been in business, and how did you become involved in your business?

Frank Harshman Sr. purchased his first Caterpillar bulldozer in 1950 and began building ponds and terraces on his own ranch and did dirt work for neighbors as well. These neighborhood jobs helped supplement cattle and farming operations, which were his principal sources of income. In 1970 an employee encouraged Frank Sr. to purchase a rock crusher with the understanding the experienced employee would operate the crusher. The plan did not work out and the equipment sat idle in the shed for seven years.



Rockpiles I
Laura Berman

In the mid '70s, Frank Sr.'s three sons, Frank Jr., Jeff, and Warren, all worked on the ranch and did dirt excavation work, building ponds, terraces, and watershed structures. Competition was tough during those years, and there was hardly enough dirt business to support the family. In 1978 the brothers retrieved the rock crusher from the shed to try their luck in a new endeavor that would sustain the family business.

Describe some Flint Hills projects you've been involved in.

Over the last forty-one years, Harshman Construction projects have supplied a wide range of rock products to meet the needs of the Flint Hills. We provide millions of tons of agricultural limestone, or ag-lime, to area farmers; provide loose stone, called riprap, to form foundations for river bank stabilization jobs, county roads, highways, and railroads; and supply rock for private and commercial use.

How big is your staff, and what is a typical work day like?

Harshman Construction employs seventy-four people. The staff includes workers who operate five portable crushing plants in seventeen quarry locations in south-central and southeast Kansas, twelve of which are located in the Flint Hills; five people who build much of the rock-crushing equipment; five full-time mechanics and

service techs who work diligently to keep the equipment operating; and four office support staff who take care of bookwork and dispatching trucks. Eight family members from the next generation have joined Harshman family business teams, one of which is the rock-crushing group.

How significant are the Flint Hills to your work?

The Flint Hills offer much more than cattle grazing and beautiful scenic drives. More than sixty-five underlying limestone and shale members make up the Flint Hills, but only a small number of those are suitable for rock quarry operations. From these formations come large limestone building blocks that are architecturally sized and shipped for use in Kansas, the Midwest, and beyond. The crushed aggregate we produce has multiple uses, ranging from county and township roads, highways, airports, railroads, and parking lots to agricultural lime to limestone being used in cosmetics, cattle feed, and more.

Describe an important role of your business.

The concept of mining is taking something from below the surface of the earth that is of little value in its current natural state. It is brought to the surface and processed into something needed for many purposes, including building the local, state, and national infrastructure.



Farmland Flight
Justin Marable

How does your business impact the Flint Hills?

Crushed rock is a high-bulk, low-cost product. With the low cost of crushed rock and high transportation costs, rock cannot be transported many miles before the cost of transportation exceeds the cost of the rock product. For this reason it is important for the Flint Hills area to have multiple quarry locations not only to meet the needs of public and private construction projects but also to meet the needs of Flint Hills ranchers. Rock produced locally in the Flint Hills saves

counties, townships, and the state valuable taxpayer dollars while also providing jobs for area residents.

Discuss your efforts to restore land disturbed by quarries.

Harshman Construction takes Flint Hills preservation very seriously. Operating a rock quarry requires great care and effort to restore the affected area to its original use, whether the property was originally farm ground or pasture land. Creating large water storage structures where the terrain allows is often the end result of

the quarry reclamation process. Harshman Construction proudly claims multiple state and national awards for preservation efforts. These include the State of Kansas Governor's Mined Land Reclamation Award, presented annually to one mining operator from the state, and the National Association of State Land Reclamationists Outstanding Reclamation Award, presented annually to one mining operator in the nation. These awards recognize companies that have exceeded required efforts to reclaim and restore mined properties.

What are your biggest challenges?

Challenges to the industry are similar to agriculture in some respects. High input costs continue to add to the expense of producing rock, which creates small margins and stiff competition. Among the drivers of increased expenses are the high cost of equipment and repairs, insurance, explosives, and the ever-increasing list of government agencies producing more regulations. Another challenge includes increased difficulty in getting property zoned correctly to acquire a special use permit to open and operate a rock quarry. Mining operators must comply with regulations from no less than twelve agencies. At least seven of these agencies deal with environmental regulations.

What inspires you in your work?

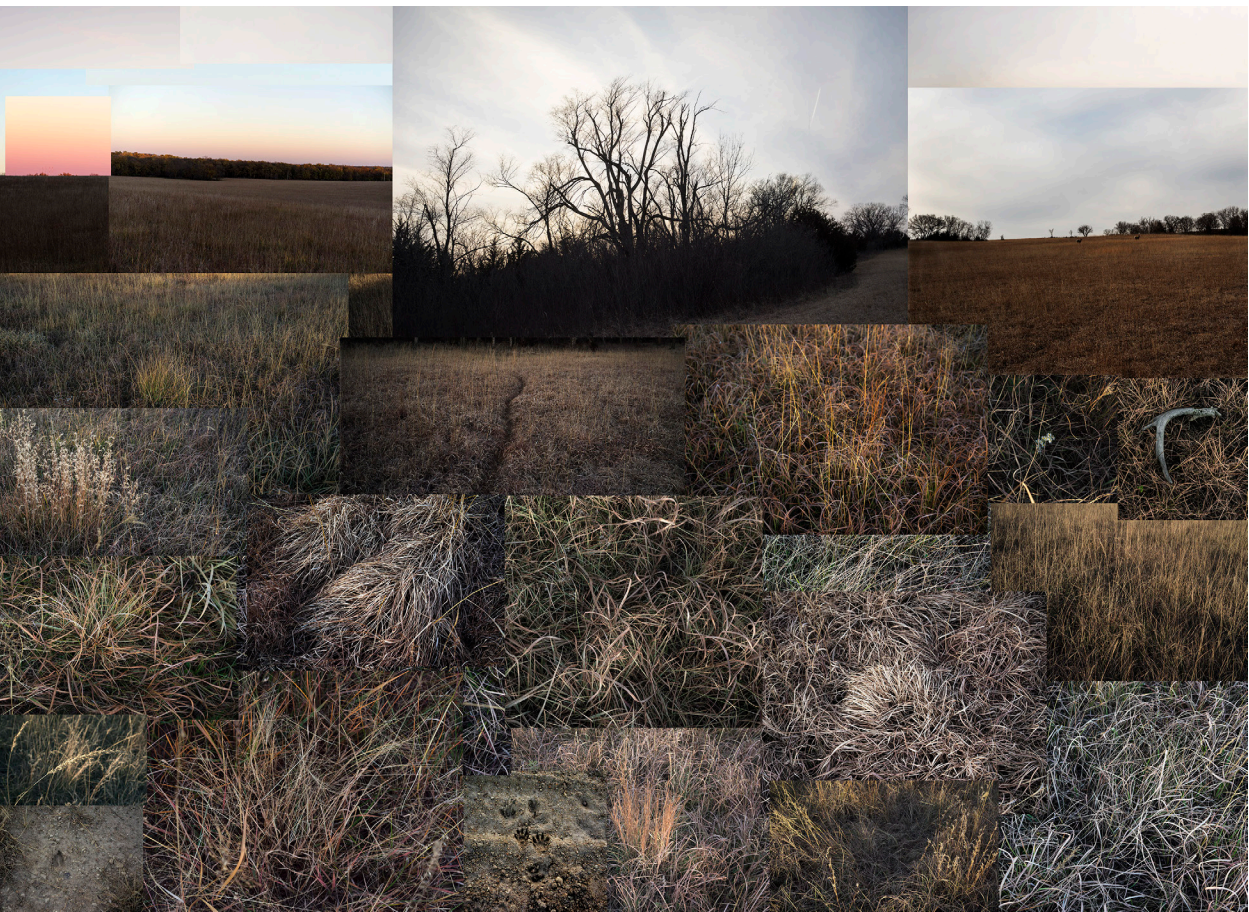
My inspiration for work is knowing that all we have belongs to God, and He allows us to be faithful stewards of His possessions. God entrusts and charges us with the responsibility, as much as is possible, of operating every aspect of the business with excellence. It requires making decisions that incorporate God's principles to the best of our ability and investing time, treasure, and talent into important areas outside the business. Applying God's principles requires a commitment to much more than making the business profitable.

What would you like your legacy to be?

Harshman Construction strives to be a good employer, to provide dependable and quality service to our customers, and to uphold a reputation and legacy of integrity in the industry and marketplace.



Till no. 1
Levi Robb



Fent's Prairie, Winter
Terry Evans

WHEN THINGS ARE LOOKING DOWN

I tend to blame it on
the beauty of our sunsets,
when a Kansan settles
and never leaves home.
Too down-to-earth
to envision new horizons.
Look up.

Above you,
groupings of stars
bid to be seen,
shake with envy,
await to be named;
to be given your story.

They wish to look,
to sound, to dance
and laugh like you;
to shine amongst us.
Look up.
Pity the far away.
They can't hear
the songs you sing,
see the lives you touch,
feel the warmth I felt
as I watched you smile.
Look up

Huascar Medina is the Poet Laureate of Kansas
2019-2021, a program of Humanities Kansas to
promote poetry as a public resource.



HISTORY

*What is history? An echo of the past in the future;
a reflex from the future on the past.*

Victor Hugo

OPPOSITE PAGE

Diamond Springs Stage Station
Dave Leiker

CARVED IN STONE

Like the stony earth under their feet, past residents of the Flint Hills were a tough lot who faced natural and human adversity and persevered. Indigenous peoples built innovative cultures close to the land. Later, pioneers settled here and fought to bring Kansas to the Union as a free state. All of these ancestors left a vibrant legacy that, like limestone, endures today.

Come explore the history of Wabaunsee County and the intriguing stories that surround it.



John Olson Settlement
Tom Parish



Breathing Pink
Ruth Loveland

NATIVE-MADE STONE TOOLS OF THE FLINT HILLS

For more than 13,000 years, people have been living in the Flint Hills region.

For most of this period, their primary material for making tough, durable tools was the flint or “chert” stone from which the Flint Hills derive their name. The use of bone, wood, antler, and limestone was also important, but the most durable and preserved aspects of these early technologies are the chipped stone tools and the debitage or flakes left from the manufacture of those tools.

The economies of the prehistoric cultural groups who lived in the Flint Hills were diverse, changing through time and adjusting to the seasons and resource availability. Spearpoints and arrowheads are commonly recognized artifacts, but many other types of tools were also made to serve a variety of purposes.

The stone artifacts typically represent only a portion of the original tools, many of which would have been attached to handles or shafts. A variety of hafting systems were created depending on the tool’s purpose, but wood, antler, rawhide, and bone were commonly used to make handles, which were attached using cordage, fibers, rawhide, and mastics from materials such as tree sap. Axes for cutting wood, knives for butchering, sickles for cutting grass to make thatch and for harvesting grass seeds for making meal, scrapers for hide processing, gouges for woodworking, hoes and picks for digging roots or storage pits, and awls and drills for perforating a variety of materials were all manufactured from Flint Hills flints.

Throughout the Flint Hills, from northern Oklahoma to northern Kansas, special places exist where, for thousands of years, people dug pits through the soil and limestone in order to access

the highest quality flint nodules for making tools. These sites are known in Butler, Chase, Cowley, Geary, Riley, Pottawatomie, Wabaunsee, and other counties in the Flint Hills. The colorful banded and fossiliferous flint stone was highly prized and was traded and carried throughout the Kansas and Oklahoma region and beyond since the earliest prehistoric time.

CLOVIS

The first widely recognized and distinctive spear point type known to have been used in the Flint Hills area is the Clovis point, named after a site discovered in the 1930s between Clovis and Portales, New Mexico. When people first came to the New World, they were using spears and darts propelled with spear-throwers or atlatls. This same technology for hunting had been used for thousands of years and continued in use in the Kansas area until about 1,500 years ago, by which time bow and arrow technology had displaced use of atlatls. Clovis points, like many dart and spear points used later in time, were often multifunctional and could serve as knives and projectiles. Clovis points tend to be well made of fine quality stones and are characterized by a flute or large thinning flake removed from the base on each face. This enabled hafting onto relatively thin hafts that enabled penetration of the point and shaft when it was used in hunting.

FOLSOM

Following Clovis people and technology, there were a number of distinctive technological traditions that were used in the Flint Hills. Folsom points, used by bison-hunting people between 11,000 and 12,000 years ago, were thin and delicate projectile point tips that were well fluted and not used as knives. Clovis, Folsom, and other Paleoindian projectile point types are distinctively well made, lanceolate in form, and lack notches. A variety of projectile point types were used by these early hunting and gathering peoples who lived at the end of the Pleistocene and during the earliest part of the Holocene or modern climatic era. Types such as Agate Basin, Scottsbluff, and Allen, among others, are found in the Flint Hills. Allen points are characterized by distinctive parallel oblique flaking. The transition from the Paleoindian to Archaic periods is marked by the Dalton period, which shares some characteristics of each of these adaptations. The Claussen site in the Flint Hills has an important series of occupations by Dalton peoples reflecting their diverse economy and resource use.

DART POINTS

After 8,000 years ago, most projectile points have distinctive haft elements demarked by shoulders, stems, and/or notches near the base or hafted end of the blade opposite the tip. Much of the



*Munkers Creek Axe from the Foltz Site, Wabaunsee County
kansasmemory.org, Kansas State Historical Society*

variation that occurs in these dart points (which archaeologists refer to as Archaic) is the result of reworking broken or damaged points, differences in the stone workers' abilities, quality of the stone, and specific functions or hafting systems used. There are distinctive types, however, that archaeologists have defined and which have limited periods and regions of occurrence. Distinctive types of dart points continued in use during the Woodland period and during the transition from spear throwers to bow and arrow technology.

AXES, CHIPPED STONE

Axes were an important part of the technology of foraging peoples who lived throughout the Flint Hills since the beginning of the modern ecological era, or Holocene. Some of the earliest axes known

were made from metamorphic rocks, rather than flint, and were ground into shape. Later in time during the last 2,000 years, ground stone celts or non-grooved axes were commonly used. For many thousands of years, however, chipped stone axes made from flint were in common use. These axes are not known from the tool kits of the earliest Paleoindian hunters and foragers, perhaps because their homes were lightweight and portable to suit their more mobile lifestyles. After 9,000 years ago, people began to build more permanent structures and to repeatedly occupy the same locations. Logs were used for structures and canoes. Sheets of tree bark were used for structure coverings, and the inner bark of some trees, such as elm, was used for making cordage. Axes were also important for clearing forest parcels

to allow gardening and to encourage native plants, such as gourds and squash. Axes were commonly resharpened until they were too small to function as axes and then would be recycled for use in other purposes.

GOUGES

Gouges and adzes made from chipped stone were important multi-purpose tools used primarily for working wood, antler, and bone. Before 9,000 years ago, people were making dugout canoes using a combination of fire and adzes to hollow out logs for such use. Gouges were also used for woodworking, particularly the final shaping of handles for tools and shafts for spears. Gouges were particularly common during the middle Holocene period from 3,000 to 7,000 years ago. Adzes were in use during the time of the Dalton complex, 10,000 years ago or soon after.

MUNKERS CREEK KNIVES

These sickle-shaped stone knives were hafted to short handles and used to cut grasses as early as 7,000 years ago. Grasses were cut for use as thatch for roofing of structures and as matting or bedding. Grass seeds were also important for making flour and as boiled food. Other types of knives were also made, including those with steeply beveled edges that were used for butchering and filleting meat. These beveled knives often had four working edges and were common after about

800 years ago, with the latest versions being hafted at one end and having two working edges.

SCRAPERS

Many products used by prehistoric people required preparation by cleaning or scraping, whether the items were made from wood, antler, or hide. Scrapers were commonly used for preparing hides, particularly for removing the inner membranes in the process of tanning or softening hides for use. Hides were used for a wide variety of purposes, including clothing, shelter, and cooking. Hides with the hair removed could be used to boil water, either suspended on a frame or lining a basin-shaped hole with heated rocks added to boil the water. Scrapers were often hafted, sometimes in bison ribs or deer antler tines, in order to provide more leverage. Scrapers used to soften dried hides developed very distinctive wear patterns on the working edge. Scrapers would be repeatedly resharpened until they were worn out, discarded, and replaced.

ARROW POINTS

The introduction of bow and arrow technology began soon after 2,000 years ago, but the transition from spear throwers and darts was a relatively slow one with concurrent use of both spear throwers and bows and arrows for several hundred years. Arrows could be shot more rapidly



Munkers Creek Knives from the Elliott Site, Geary County
kansasmemory.org, Kansas State Historical Society

and with less body movement than thrown darts, but darts had more mass and stopping power. Arrow points tended to be significantly smaller and lighter than dart and spear points, and the stem width where they were attached to shafts was significantly narrower. A variety of notched arrow point styles are found in the Flint Hills. Triangular arrow points were the last form of arrow point made from Flint Hills stone, and these continued in use even after the introduction of metals by European contact. The last stone arrow points were made and used during the early 1800s, but flint scrapers continued to be used in hide working, at least occasionally, into the early twentieth century.

It is easy to underestimate the ingenuity, creativity, and artistry of the early Flint Hills peoples who used Flint Hills stones

as key elements in their everyday lives. Their deep understanding and appreciation of the region enabled them to sustain their ways of life for thousands of years. The craftsmanship and artistry exhibited in Flint Hills stone tools should not be surprising since these people relied upon and worked to perfect these tool forms for more than 10,000 years. The stone tools are only a limited reflection of their life ways and of their understanding of the Flint Hills, which resulted from generations of occupation during a time before roads, stores, or manufactured and packaged goods.

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Hessdale, Wabaunsee County
Mark Feiden

EARLY SETTLEMENTS IN WABAUNSEE COUNTY

The enactment of the Kansas-Nebraska Act on May 30, 1854, signaled a new era in the politics and demographics of what became the state of Kansas.

Demographically, the act provided for the opening of Kansas to white settlement. The land that is now Kansas, Nebraska, and Oklahoma was for decades a dumping ground for the federal government’s removal of Native Americans from all of the eastern United States. At the time of the creation of the Kansas Territory, there were more than a dozen Native American tribes that owned reservations within its borders. The plan for Kansas statehood called for the territory to be divided into one-mile squares, specifically designed for white settlement, and that plan called for the removal of the tribes who had made their homes in Kansas.

Politically, the act allowed for the admission of two new territories, Kansas and Nebraska. More importantly, the law settled the question of whether the two territories, should they be admitted to the union as states, would allow human slavery. The answer to that hotly contested question was found in the concept of “popular sovereignty,” which allowed the slavery status of the two states to be determined by a popular vote of the people residing in the territory at the time of statehood. Popular sovereignty became the kindling in Kansas for a fiery confrontation that would consume the nation.

The first permanent white settler who came to Wabaunsee County was 29-year-old John P. Gleich. He arrived in 1853, squatting a claim on the south branch of Mill Creek in what

became Farmer Township, about four miles south of Alma. Gleich's first task was to cut enough trees along the meandering stream to construct a small log cabin.

With the official opening of the Kansas Territory in the summer of 1854, a steady flow of settlers from the East arrived, staking their claims on any property that was not occupied by settlers. The Preemption Act of 1841 allowed "squatters" to claim up to 160 acres of land, which would become theirs if they resided on the land for fourteen months. The Preemption Act was replaced with the Homestead Act of 1862 and a series of revisions to that law, which opened 160 million acres of land to the public for settlement. Like the Preemption Act, settlers could claim 160 acres of land under the Homestead Act if they made improvements to the property and resided there for five years within a seven-year period after staking their claim. Squatters who were living in Kansas when the Homestead Act became law in 1862 were required to purchase their land from the federal government for \$1.25 per acre.

The creation of the Kansas Territory also brought political divisions and boundaries to the eastern sections of Kansas in the form of counties, and by the end of 1856, all of the state had been surveyed. What is now Wabaunsee County was named Richardson County Territory.

The first settlement of European-American people in Wabaunsee County

was established in the summer of 1854. On the south branch of Mill Creek, Ed Krapp and his brothers-in-law, Peter Thoes and Joseph Thoes, staked claims. Joseph Thoes wrote in later years that the three men constructed three log cabins on Mill Creek in three weeks. The need to construct shelter prior to the onset of the Kansas winter was of utmost urgency, and log cabins offered the quickest and easiest solution to the settlers' plight.

In Wilmington Township, George M. Harvey and Samuel B. Harvey settled in 1854, constructing a log cabin on Dagoon Creek. Just to the north of Farmer Township, Gottlieb Zwanziger opened a flour mill near the confluence of the west and south branches of Mill Creek in 1856. Ten years later this settlement became Alma.

To the west of Alma Township, Joseph Grimm, Michael Fix, and other settlers built cabins along the west branch of Mill Creek in Washington Township during the late 1850s, as settlements formed along the stream.

On Mission Creek a settlement near Keene was established with the arrival of the Mossman family in 1856 and the Beach family in 1857. The first store was established in 1858. Joseph Little, a latecomer who arrived on Mission Creek in 1866, wrote of the settlement in a December 1901 letter to *The Alma Enterprise*: "I came here thirty-five years



Alma 1910-1920
kansasmemory.org, Kansas State Historical Society

ago and found twenty-three log houses on Mission Creek with twenty-five families living in them. Also, three log schoolhouses and school going in each and preaching in one every Sabbath. All of this was within a distance of nine miles. I helped to build four log houses after I came here, in 1866 and 1867.”

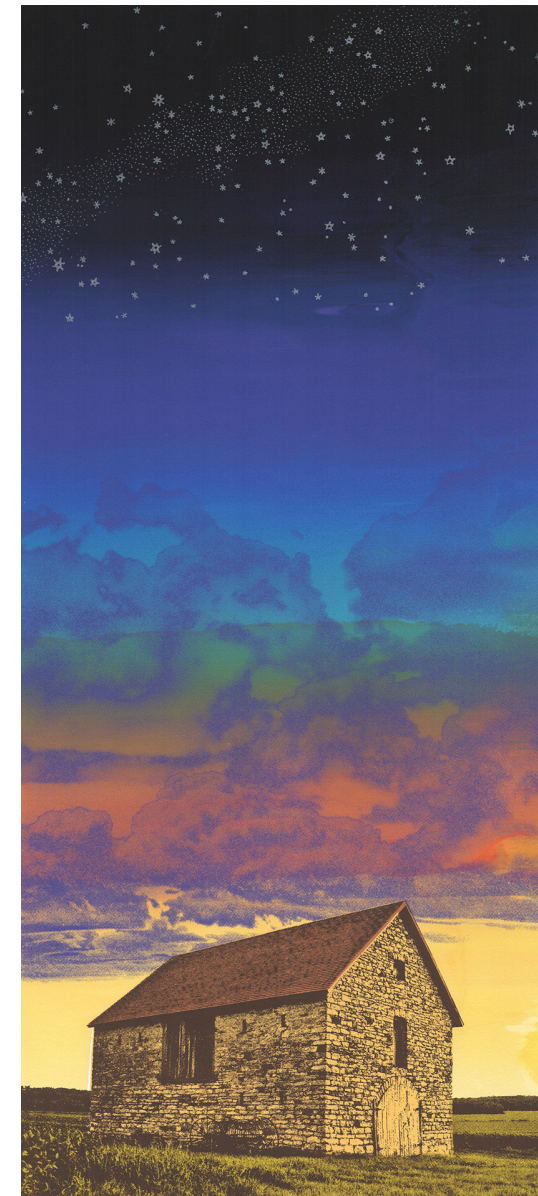
In 1856 a new breed of settlers came to Richardson County, members of the New Haven Colony from Connecticut, more commonly known as the “Beecher Bible and Rifle Colony.” These seventy-three colonists, including sixty-four men, four women, and five children, found fifty-nine settlers already residing in Wabaunsee. While most of the members of the Beecher group planned to make a new life on the Kansas frontier, the impetus that prompted their arduous trip to the Flint Hills was the desire to become voters in Kansas to ensure that it would be admitted to the union as a free state. Other settlers from northwestern Missouri were making a much shorter trip to Kansas to claim their pro-slavery vote. The arrival of the New Haven Colony brought the population of the Wabaunsee settlement to 132 residents, making it the largest early settlement in Richardson County.

For the first ten years of European-American settlement in Wabaunsee County, most of the northeast quarter of the county was occupied by the Potawatomi Reserve. In the 1860 census, more than

200 Native Americans lived in that section of the county. After passage of a new treaty between the government and the Potawatomi tribe in 1868, the reservation was reduced in size from 3 million acres to 30,000 acres. Soon after, the reserve in Wabaunsee County was opened to white settlement, and the Potawatomi were forced to abandon their homes for the remaining reserve in Jackson County or move to Oklahoma.

The days of early white settlement in Wabaunsee County were difficult and fraught with political upheaval, yet the influx of new settlers showed no signs of waning as statehood arrived in 1861. With the coming of homesteading, the county’s population grew in leaps and bounds every year until the beginning of the twentieth century.

Greg Hoots is a community historian and author specializing in the Kansas Flint Hills. Hoots operates *The Flint Hills Special Digital Magazine* and maintains a digital archive of historic Kansas photographs.



Rural Rising
Justin Marable



Schoolhouse on Mill Creek Road
Dave Leiker

ONE-ROOM SCHOOLS IN WABAUNSEE COUNTY

In 1854 some of the earliest white settlers in Wabaunsee County put down roots along Mill Creek in the county's north.

Times were tough and uncertain. Families had few resources, but Mill Creek valley was beautiful and full of promise. Children living in this valley began to meet for schooling in a log cabin before any school districts existed.

Two schools were officially organized in 1859, one in Wabaunsee Township and another along Mission Creek in eastern Wabaunsee County. By 1863, fifteen districts existed across the county with thirteen holding at least a three-month school term. The Wabaunsee County educational system was ahead of some counties in the state because of a taxation system for township needs, including local school district expenses.

In School District 1, Wabaunsee Township, the new settlers scrambled to build their homes before the winter of 1859, which proved to be a long, cold season of ice and snow. Their buildings included a 14' x 20' church where school was held on weekdays with the teacher, Miss M.H. Cotton, receiving a salary of eight dollars per month for a three-month term.

When Alma sought to become the county seat, citizens had to decide whether to build a new schoolhouse or a new courthouse and held school in the courtroom when court was not in session. Other schools utilized log cabins or homes in newly settled areas of the county until a school could be built.

A colony of Pennsylvanians in the southeast part of the county and New Englanders settling in the Wabaunsee Township area were primarily well educated. The New Englanders supplied many

of the teachers throughout the county, especially during the Civil War years. The central and west part of the county were mainly German immigrants who valued education. According to the biographies of these families, many were college educated prior to their emigration from Germany to America. Examples included a civil engineer from Polytechnical Institute, a priest, an individual educated at the University of Cologne, and another educated at Halverstadt Medical College in Prussia.

After the Kaw and the Potawatomi Indians were displaced from Wabaunsee County in 1868, multitudes of settlers flocked into the county. Log cabins, barns, houses, businesses, and schools were quickly constructed. Not all who came to Wabaunsee County understood the Flint Hills landscape, so many homesteads and schools located near the creek bottoms succumbed to the floods of the 1860s. On October 25, 1869, a devastating prairie fire roared into the county from the southwest and scorched a sixty-mile-wide swath of pasture across the county. The fire took its toll on many buildings, including schools. Many native stone schools were systematically built following the vengeance of this fire. Documents reveal that almost half of the ninety-one one-room school buildings in the county were made of native stone at one time or another.

These rural schools were bursting at the seams with students ranging in age from five to twenty-one. In 1882, fifty-two students were enrolled in Des Moines School. In 1885, “Miss Halderman’s school [district not named in the newspaper] wishes us to correct an error made in her school report last month. The attendance should have been 59 instead of 69.”

The population explosion in these communities meant teachers were in high demand, and the state attempted to quickly provide certified teachers. The first official path to teaching included completing eight years of schooling and passing a teacher examination. Later, summer or “teacher institutes” were required for teachers to maintain their teaching credentials. One teacher in Wabaunsee County took her first teacher examination at the age of sixteen and began teaching before she was seventeen.

Most one-room schools were ungraded until 1890, and children were not placed in a grade level. They were grouped according to ability, and the older students were mentors. By 1900, most schools were teaching grade-level curriculums. By 1903, the state of Kansas advanced rural education by also requiring school to be in session for five months, a two-month increase from the previous three-month term.

The size of a one-room school district was typically six square miles with the hope



School Distric 12, Wabaunsee County
kansasmemory.org, Kansas State Historical Society

that children would not have to walk over two miles to school. Wabaunsee County's roads, however, followed the paths of least resistance rather than square miles. Paths to school sometimes meant students crossed streams at low water fords and then climbed from the valley floor to follow an open trail across the flinty upland ridge. The Flint Hills terrain was sometimes challenging for those walking to school. "I didn't start to school until I was eight years old," a Mrs. Thomas reported. "There were three creeks to cross and my parents wouldn't let me go to school until I was big enough to cross the streams safely."

Before school began each year, the land around the building was often fenced to keep the cattle out and several furrows were plowed to protect the building from prairie fires. In September when grass grew as tall as six feet or higher, small children could get lost walking to school. The plow was used again to plow a path for the child to follow to and from school. No one got lost even with snow on the ground.

These one-room rural school buildings standing on the prairies were a symbol of the community's commitment to learning. These buildings also served as community centers for all the families nearby. Wabaunsee County newspapers reported school buildings being used for church and revival services, holiday parties, dances, quilting bees, literary and debate societies, singing schools, political meetings, box

suppers, picnic basket festivals, baseball games, and pie suppers.

Each one-room school had its own stories: teacher walked seven miles to and from school each day, teacher was locked in the coal shed, outhouse was tipped over on Halloween, students carried water to school when the well went bad, rattlesnake was shot by teacher, wet and muddy shoes dried by the coal stove, an outbreak of diphtheria closed the school, workup and "ante over" played at recess, memorizing and reciting, watering and feeding horses at noon, pounding the chalk dust out of erasers. Too many stories are forgotten, but those who attended these schools fondly recollect three things: the sense of family, relying on each other during the hard times, and community spirit and togetherness.

The Great Depression and the end of WWII were the beginnings of the decline of one-room schools. By 1950 the number of one-room Kansas schools plummeted from 9,200 to 3,000, and in the 1960s the last one-room school in Wabaunsee County closed. In 1990 Rolla, the last one-room school in Kansas, closed in southwest Kansas. Today, there are still over 400 one-room schools in existence operating in five states: Montana, Nebraska, Wyoming, South Dakota, and California.

Vicki Patton is a teacher, librarian, and community historian who attended a one-room school.



Lone Cedar School
Mark Feiden



Josie McCoy, Dunlap Colored Cemetery
Derek Hamm

HOW TO READ A CEMETERY

A cemetery is a storybook. Enter one and you can tell who settled this area and who followed, how they spent their days, what God they worshipped, what they held dear, and where they were on the societal ladder.

A community's education, social structure, immigration patterns, and economic landscape can be discerned from the cemetery like words and images of a book. Walk through a cemetery and watch its story unfold.

READING A CEMETERY—A PRIMER

To read the stories that cemeteries tell, consider the following elements:

Location Is the cemetery inside or outside of city limits? Rural? Next to a church?

Maintenance Is the cemetery neat as a pin with the fence painted, the grass mowed, and the markers upright and in good condition? Or not so much?

Arrangement How is the cemetery plotted? Are the paths straight, on a grid, or curve and meander? Are the graves oriented east-west, are markers encircling central stones, or do plots follow the lay of the land, curving around hills, ponds, and paths? Do all graves appear to be marked by some sort of headstone, or are there gaps and irregularities?

Monuments and Markers Are the markers of uniform size, shape, and material, or are they varied? What are the materials? Are they professionally produced or vernacular? Simple or ornate?

Folks Do the names reveal nationalities? Familial relationships? What languages are seen on the markers? Are there symbols that provide clues to the deceased's age, marital status, religion, interests, or social organizations? And who isn't there—do the names reflect all the people from the area, or are certain residents absent?

A TALE OF TWO CEMETERIES

The two cemeteries of Dunlap are an excellent study. Many of Dunlap's residents were Exodusters who began their lives enslaved in the South. Following the Civil War, they migrated to the Flint Hills and settled southeast of Council Grove. The two cemeteries were segregated by race: the Dunlap Cemetery and the Dunlap Colored Cemetery. Over time the townspeople became more integrated in their daily lives, but the tradition of separate cemeteries was already established.

Both cemeteries lie near a hilltop and are plotted in a no-nonsense grid, with stones facing in an east-west pattern. This is a common arrangement of rural plains cemeteries. I imagine the farmers, ranchers, and laborers who built such cemeteries probably took comfort in familiar and simple grid patterns, similar to farm and field. But the carefully landscaped, park-style cemeteries popular in the late nineteenth century urban areas were impractical and unnecessary on the plains.

While the white Dunlap Cemetery has some larger, more extravagant markers, for the most part both cemeteries have modest markers with minimal adornment in carvings or symbols. Both do contain several military markers. Both also have many vernacular stones, some with errors of spelling or engraving, indicating people of more humble education, means, and tastes. There are no saints or rosaries adorning the stones or decorating the graves—the residents were likely Protestant. The contrasts, though, are noteworthy.

Enter the Dunlap Colored Cemetery and you will immediately notice the gravestones are scattered throughout, with a few in groups, others standing alone. The gaps are graves that are missing markers. Some stones have likely sunk beneath the surface and are hidden by earth and grass, while a few may have been moved and repurposed. Most of the gaps, however, are spaces where wooden markers once stood. Wood decomposes relatively quickly on the prairie.

There are a fair number of vernacular stones to be found, primarily made of concrete or native stone. A homemade stone can be a creative expression, but usually it is the financially practical option. The farms and ranches of the Flint Hills would have had all the necessary tools and materials to create a marker out of concrete or limestone, and polished granite or marble monuments were luxury



Sylvester Hays, Dunlap Colored Cemetery
Derek Hamm



Emma Schnitzler, Dunlap Cemetery
Derek Hamm

items. Accessibility also played a role. Granite and marble were often ordered and brought in from distant states, and the opportunity to even shop for these markers may not have been afforded to the black residents of Dunlap.

Nearly all the markers in the Dunlap Colored Cemetery are weathered, cracked, crumbling, or toppled, with few markers dating from the last fifty years. The citizens of Dunlap slowly left the town seeking opportunity elsewhere, and the last black resident was buried in the Dunlap Colored

Cemetery in 1993. This emigration meant that families did not stay to maintain the cemetery, repair the stones, or replace decaying wooden markers with more permanent stones. There is a renewed interest recently in the cemetery, resulting in some basic mowing and maintenance. The Dunlap Colored Cemetery is now on the National Register of Historic Places.

In the other Dunlap cemetery, there are fewer gaps—fewer missing markers—and there are also fewer homemade stones, suggesting the white citizens of Dunlap

had more financial means and access to purchase these more expensive markers, or their families replaced the wooden or homemade markers at a later date with permanent granite or marble headstones. The cemetery is tidier and with recent burials, indicating at least some of the descendants of the original residents remain in the area and are active in the upkeep of the cemetery. The names on the stones are primarily of English and German heritage, with a few Scandinavian and other northern European names noted. The stones are on average larger than those in the Dunlap Colored Cemetery, but for the most part they remain relatively modest and traditional and include a few vernacular stones.

Most of the markers have minimal adornment, including a noteworthy lack of symbols showing membership in such organizations as the Independent Order of Odd Fellows (IOOF), the Freemasons, or the Woodmen of the World. These are common in other cemeteries across the country, as these societal organizations often provided some form of life, health, and burial insurance to their members. However, the Catholic church and some Protestant denominations opposed membership of their congregants in these fraternal societies. These organizations, in turn, originally had restrictive membership rules, often excluding people based on religion, gender, race, profession,

nationality, or economic status. The residents of Dunlap, black and white, may have not met the entry requirements; their religious or philosophical beliefs may have made them uninclined to join; or as residents of a small, rural town, they may have simply not had the opportunity or exposure to any of the common fraternal and social organizations.

What do the Dunlap cemeteries tell us? That the town was at least initially segregated, that the black residents of Dunlap have likely all left the area, and that some descendants of the white residents remain nearby. Most residents of Dunlap were traditional, humble people of simple taste and means, and they did not belong to large societies such as the Freemasons or the IOOF. They were likely Protestant. Several served in the military from the Civil War through WWII. And unlike the town of Dunlap itself, this story is not small or simple—it is nationally relevant.

As you are driving through the Flint Hills, enjoying the rolling landscapes, the open skies, the towns of limestone and the ranches with their well-fed cattle, don't overlook the cemeteries. Stop at that lonely cemetery on the hill. Walk the rows, examine the markers. Read the stories.

Lori Strecker is a nurse, cemetery enthusiast, and a life-long Kansan, currently residing in Lawrence.

VERNACULAR TOMBSTONES

Prairie peoples have a long tradition of “make do and mend,” and this ethos extends from the cradle to the grave. Vernacular and folk-art tombstones are made by untrained craftspeople and can be found throughout the Flint Hills. Made from inexpensive materials that were likely on hand—concrete, wood, stone, and metal—vernacular tombstones are often decorated with pressed-in inscriptions, glass inlays, or ceramic figurines. Usually more ephemeral than traditional granite and marble markers, the charm of many of these folk-art works are the rough, unsettled, and broken or missing pieces. A poignant testament to the transitory quality of our lives.



Juan Montana and Children, St. Anthony Cemetery, Strong City
Lori Strecker



Child's Grave, Dunlap Cemetery
 Predo Salinos, Calvary Cemetery, Council Grove
 Derek Hamm



Stephen Prudden, Dunlap Cemetery
 Martin Ramsey, St. Anthony Cemetery, Strong City
 Derek Hamm



Untitled Quilt 4
Letitia Huckaby

TALES OF COURAGE IN THE HEARTLAND

Be ye Steadfast and Unmovable

1 Corinthians 15:58

I have not the least fear that a hundred men bred under New England influences will be too eager or too war-like. You have been taught to create wealth and not to rob it; to rely on intelligence and rectitude for defense. And you will not be in any danger of erring on the side of violence. But you are sent for the defense of great rights. You have no liberty to betray them by cowardice. There are times when self-defense is a religious duty. If that duty was ever imperative, it is now, and in Kansas.

On March 22, 1856, Henry Ward Beecher, an anti-slavery preacher, presided over a meeting at North Church in New Haven, Connecticut, where he gave a rousing speech to colonists departing to Kansas. Following the 1854 Kansas-Nebraska Act, colonists began moving to the territory in an effort to make Kansas a free state. Beecher claimed that victory in Kansas was “but one bud on the tree, one blossom among the thousand that are afterwards to bloom,” and that a victory in Kansas would help the country return to God before it gave in to further temptation. Praising the colonists for their bravery and sacrifice, Beecher extolled that “their labors would be crowned with abundant success.”

Professor Silliman of Yale College followed Beecher’s exhortations, giving a short speech in which he imparted the

importance of self-defense as a religious duty. To the travelers, the professor bequeathed one Sharps rifle, which set off a chain reaction of donations in kind. At the end of the meeting, twenty-seven Sharps rifles had been pledged to the party, with the promise of twenty-five more from Beecher's congregation. These colonists and their supporters knew they were headed straight into a lion's den but understood the need to defend themselves.

The group, composed mostly of men, set out on the last day of March 1856 to help free Kansas during one of the most contentious periods of Kansas history. They were known as the Beecher Rifle Colony or the Beecher Rifle Church as early as 1899. Ongoing clashes with pro-slavery advocates had begun in Kansas in 1854 and continued to simmer even after Kansas was admitted into the Union as a free state in 1861. These conflicts, commonly referred to as "Bleeding Kansas," were skirmishes between anti-slavery advocates in Kansas and pro-slavery advocates, often from Missouri, which had been a slave state since 1821. Though the Beecher Rifle Colony entered a contentious Kansas armed to fight, the church and Christianity were always focal points for these colonists, and they leaned heavily on their faith to guide them through this trying period.

Traveling by train, steamboat, and wagon, the group arrived that spring in Wabaunsee, located one hundred miles west

of the Kansas-Missouri Border. Though the church was not officially organized until the following summer, the group maintained regular public worship, establishing a Bible class and Sabbath school. By July 1857 they had organized the First Church of Christ at Wabaunsee, holding their first meeting outdoors in a grove. Reverends from Manhattan and Lawrence were invited to that first meeting—Reverend S.Y. Lum of Lawrence to preach, and Reverend Blood of Manhattan to give the fellowship. A group of twenty-eight colonists received services that day, and though the church was congregational, it was "[yet] so general ... that any true child of God can easily fellowship with us."

Though these parishioners immediately set out to establish their Christian faith, they arrived in the midst of the struggle with pro-slavery factions. Lawrence, a staunch anti-slavery Union hub, was frequently attacked by pro-slavery forces from Missouri, and colonists from Wabaunsee set out to assess the situation. Though the Beecher colonists had only been in Wabaunsee for three weeks, William Mitchell and J.P. Root were appointed to travel to Lawrence to gather more information about ongoing conflicts. Upon their departure, just outside of Lawrence, they were fired upon and kidnapped by the Lecompton Riflemen. These pro-slavery forces in the area questioned and held the men for being



Henry Ward Beecher and Sister Harriet Beecher Stowe
From the Lincoln Financial Foundation Collection



Her Seed
Letitia Huckaby

“Free State men.” In the face of the Beecher colonists’ ongoing refusals to cooperate, the pro-slavery forces decided to punish Mitchell, yelling, “Hang the abolitionist!” With the help of sympathetic onlookers, Mitchell survived the incident, eventually making his way back to Wabaunsee with Root, the pair of them alternating turns upon the one mule that was returned to them. The two had been held for so long, however, that their families back in Connecticut had been notified of their deaths.

This was not the last time that members of the Beecher Colony would interact with pro-slavery factions. Shortly following their first encounter with the Lecompton Riflemen, Mitchell, now Captain Mitchell, led his company known as the Prairie Guards to aid in the defense of Lawrence. They were away for six weeks and were credited with saving Lawrence during the “Battle of the 2,700.” Free State forces were away fighting the Battle of Hickory Point on September 14, 1856, when border ruffians amassed at Franklin preparing to attack Lawrence. The Prairie Guards attacked the pro-slavery forces as they began to march towards Lawrence, causing them to retreat.

These instances of courage demonstrate the Beecher colony’s commitment to their faith and upholding their Christian values. The group emigrated to Kansas for the purpose of helping Kansas become a free state, understanding that slavery was

antithetical to their moral and religious beliefs. The story of the colony hailing from Connecticut is a story of courage. These men, many of them college-educated, left the safety and relative comfort of their homes in Connecticut to move to an unknown, often vicious and battle-worn territory thousands of miles away from their homes and families. While they were not inherently violent, many of them did think that self-defense, especially in the cause of freedom, is a sacred duty. The most important of these Christian duties was the defense of themselves, and the inherent protection of the country from the stain of slavery. The sacrifices these settlers made created lasting effects on the state and on the country. With their help and dedication to their faith, they contributed to making Kansas a free state, a nickname that persists today.

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Mythos 2
Kelly Yarbrough

MOUNT MITCHELL, WITNESS TO HISTORY

The past, the present and the future are really one: they are today.

Harriet Beecher Stowe

In northern Wabaunsee County along the bluff south of the Kansas River, there is a prominent hill that stands out in an uninterrupted line of tallgrass prairie against the sky. Grass and sky—it’s a view that kindles a spark of ancient memory in our DNA. Human beings evolved in grassland, and our souls remember that home.

This landform has been considered a sacred place by Native People for hundreds of generations. It’s been witness to the westward expansion of the United States. A trail used by mountain men in the 1820s, explorer Charles Fremont in the 1840s, and European Americans in the 1850s crosses its eastern flank. The Underground Railroad helping enslaved people seek their freedom in Canada also used this route.

Known in the 1850s as Mitchell’s Hill, it’s now called Mount Mitchell Heritage Prairie Park. It became a “mount” in the 1950s when Will Mitchell, son of free-state leader Captain William Mitchell, bequeathed the hill, a portion of his parents’ farm, to the Kansas State Historical Society. Captain Mitchell had been the leader of the Wabaunsee Prairie Guards, the local free-state militia who had gone to the aid of Lawrence during the Border War. The

Mitchell log cabin was used as a station on the Underground Railroad from 1857 to 1861. Will's gift stipulated that the hill be forever known as Mount Mitchell, and that it become a public park dedicated to telling the story of his father and the Connecticut Kansas Colony.

In 1854, Congress determined that the residents of the newly created Kansas Territory would decide by vote whether they would enter the Union as a state that allowed slavery or one that banned it. In the first election for territorial officers in 1855, proslavery advocates from Missouri, who were not residents of the territory, overwhelmed voting places and fraudulently elected a proslavery government. Free-staters responded by creating a parallel government. By the end of that year, Eastern papers were proclaiming "Civil War in Kansas" as conflicts between pro- and anti-slavery forces erupted into violent confrontations.

In the spring of 1856, abolitionist and free-state advocates in New Haven, Connecticut, including William Mitchell and many associated with Yale University, joined together to form the Connecticut Kansas Colony. They vowed to establish "the New Haven of the West" on the Kansas prairie.

Shortly before the fifty-seven men, four women, and two children departed for the territory, a rally was held in their

honor at the Old North Church on the New Haven Green.

As an eyewitness reported:

In its course someone remarked that these men were leaving their homes to help save their country from the further blight of slavery, and that they should not be allowed to depart without proper means of defense, whereupon at once one of the audience became aroused, and to the surprise of the rest, and even himself, called out, "I'll give a Sharps rifle." This 'started the ball,' wholly unanticipated. It was instantly followed by others from all parts of the house, until fifty rifles were offered, Mr. Beecher pledging twenty-five from his own congregation in Brooklyn. Such an extraordinary meeting had never been held in an American church, and its proceedings were heralded all over the land, producing from the pro-slavery press a storm of unmitigated denunciation and abuse.

This account fails to mention that Beecher had become national news only weeks earlier when he was quoted as saying that the:

Sharps Rifle was a truly moral agency, and that there was more moral power in one of those instruments, so far as the slaveholders of Kansas were concerned, than in a hundred Bibles. You might just as well ... read the Bible to Buffaloes as



Mythos 9
Kelly Yarbrough

to those fellows who follow Atchison and Stringfellow; but they have a supreme respect for the logic that is embodied in Sharp's rifle.

When Beecher sent Charles Lines a check for the rifles, it was accompanied by a letter and twenty-five Bibles, a gift from one of his parishioners. The letter was reprinted in newspapers throughout the country, North and South. Often the headline was, "Bibles and Rifles for Kansas." It was from this

sequence of events that the Colony began to be referred to as the "Beecher Rifle Colony" and the Sharps rifle took on the nickname "Beecher Bible."

The Kansas Historical Society accepted Will Mitchell's gift of thirty acres in 1953. Three years later on the centennial of the colony's arrival at Wabaunsee, they completed another stipulation of the gift and erected a monument to Captain Mitchell and the Colony on the hill's summit.



Ms. Carrie
Letitia Huckaby

Unfortunately, that was the extent of the fulfillment of Will Mitchell's vision for a public park, and for fifty years it remained undeveloped. In 2005 when local people heard rumors that the society was planning to return the property to Will Mitchell's heirs, they organized a grassroots effort to gain local control of the property so that Will's vision of a public park could be realized.

That grassroots group, known today as the Mount Mitchell Prairie Guards, with initial help from Audubon of Kansas, succeeded in gaining control of the property in 2006. Composed of local residents, friends, and supporters from throughout the country, the Prairie Guards have recently expanded the park from its original thirty acres to 270 acres. They've developed the park's infrastructure, building walking trails, erecting historical interpretive signage, improving the access road, and building a parking area. Today, local people and visitors from afar enjoy the park.

Students from multiple school districts, homeschoolers, scouting groups, travelers, birders, prairie enthusiasts, walkers, and geocachers all use the park.

With our current climate favoring woody encroachment of the prairie, Will Mitchell's vision has been expanded by the Prairie Guards to include prairie restoration and maintenance essential for maintaining a healthy remnant prairie ecosystem.

As members of the Children & Nature Network, the park's managers provide educators with an outdoor classroom for teaching history, geography, geology, biology, astronomy, and civics. During their visits children also receive the benefits of exercise and fresh air.

The Mount Mitchell Heritage Prairie is recognized by the National Park Service as a Network to Freedom site of national importance to the commemoration of the Underground Railroad. The Topeka Fort Riley Road, which runs through the park, was the westernmost route of that trail to freedom. Captain Mitchell and his sister Agnes hid escaping slaves in the loft of their log cabin north of the park.

The park is one of the most popular attractions in the Freedom's Frontier National Heritage Area and along the Native Stone Scenic Byway. It is also a hands-on resource for the Flint Hills Discovery Center; feature of the Kansas River Trail, a National Water Trail; and a major feature of the envisioned Kaw River Historic Corridor between Lawrence and Fort Riley.

Michael Stubbs is a local historian of the Border War and Wabaunsee County. He is president of the Mount Mitchell Prairie Guards and is active in history organizations and prairie preservation.



Stockyards, Eskridge
 kansasmemory.org, Kansas State Historical Society

THE SAGA OF ESKRIDGE'S HISTORIC HEYDAYS

When William Gallagher traveled from Providence, Rhode Island, to California in 1857, he found a particular area in the Kansas plains to be “beautiful, the water good and pure, the atmosphere healthy and bracing.”

Gallagher concluded that someday he “would see that portion of the country thickly settled.”

Ephraim Sanford, the Santa Fe railroad, and the tallgrass prairie fulfilled Gallagher’s prediction.

A New Yorker, Sanford (b. 1822) was a lawyer, newspaper editor and publisher, and a political activist. In 1848, he spoke before 20,000 people in Buffalo at the Free Soil Party convention, an anti-slavery third party movement devoted to “no more slave states and no more slave territories.” Its members included Frederick Douglass, Walt Whitman, and John Quincy Adams’s grandson. Sanford moved to Kansas in 1857 to support the free state movement, became a colonel during the Civil War, and later served in the state legislature.

In 1868, Sanford purchased 460 acres and laid out “Eskridge” (after his friend Lt. Governor C. V. Eskridge). He built a store, a tavern, and a stage station; published the local paper, *The Landmark*; and practiced law. His 1868 home still stands on the property of the Russell Taylor Ranch in Eskridge. According to A. H. Reynard’s *History of Eskridge*, Sanford unabashedly marketed the vacant town by publishing “maps and plats showing it to be a veritable network of railroads and by giving out information concerning factories, mills, machine shops, and other like industries in operation.” In

1871, Sanford nearly succeeded in moving the county seat from Alma to Eskridge, losing by only nineteen votes. At the time the entire town consisted of Sanford, his wife, and two daughters.

In 1880, the Santa Fe built a line from Burlingame to Alma and platted “East Eskridge,” roughly adjacent to Sanford’s land. When William Gallagher returned in 1884 with his wife and daughter, he found a bustling town of 450 people with a schoolhouse and church, two drug stores, three dry goods stores, two hardware stores, a harness shop, two millinery shops, a boot and shoe store, two grocery stores, and two hotels—the Lawlor House and the Santa Fe House. There was even a “Garden of Eden” subdivision, designed by John Eden.

Sanford’s phantom factories may have lured the early settlers to Eskridge, but the tallgrass prairie gave them reason to stay. Wabaunsee County had among the best grazing pastures in North America, and the cattle business exploded as fast as the railroads could lay track.

Well-educated, well-read, and ambitious young men built a ranching industry that served markets as far away as Chicago. Many were Civil War veterans such as Joseph Lockhart, whose ranch just west of Eskridge became the largest in the county and grazed over 3,000 head. Lockhart’s great-great-grandchildren still own and operate the ranch. Ranchers John Peters, Crow Shumate, and J. Y. Waugh (dubbed

by the *Eskridge Star* as the “Cattle Kings”) formed a partnership and annually traveled to the Spade and Matador ranches in Texas to purchase thousands of cattle to graze in the Flint Hills. The *Star* provided weekly cattle reports. In 1897, 183 train carloads of stock were shipped from the Eskridge depot. In 1898, Wabaunsee County sent to market more cattle than any county in the state. In one three-week period, thirty-three carloads of cattle shipped out of Eskridge.

At the turn of the twentieth century, Eskridge supported over thirty businesses. The creamery could produce 14,000 pounds of butter in a week. The telephone directory listed over one hundred numbers, and a movement grew to build an electric railway from Topeka to Council Grove through Eskridge. By 1907 the business directory listed fifty businesses, including two under the heading “Sells Everything.” The mayor’s platform included “the interurban road, electric lights and waterworks.”

In 1909, the town celebrated the success that Sanford had proclaimed forty years earlier. For three days, over 5,000 people enjoyed the Homecoming in the Park, with a variety of exhibits ranging from horticulture, agriculture, and floriculture to a lady palmist and a seven-foot eight-inch, twenty-two-pound rattlesnake. Attractions included a colt show, horse races, ballgames, and a hot air balloon. Speeches by Senators Curtis and Dolley and



Eskridge After a Devastating Fire
kansasmemory.org, Kansas State Historical Society

Governor Stubbs inspired the crowd. Fort Riley’s Seventh Regiment Band provided music. The finale was a grand ball at the Modern Woodmen Association Hall.

A month later a disastrous fire cut short the afterglow of the Homecoming. At 3 a.m., a lamp exploded in the bakery, destroying five businesses in two hours and damaging several others. To save Trusslers Hardware, 200 men dumped four tons of salt and over one hundred barrels of water on the fire. Throughout the night, 500 men and women emptied the contents of the burned buildings onto Main Street. The *Star* reported, “...when daylight began to

dawn, Main Street reminded one of Market Street in Dublin.” It was the fourth, but not the last, fire to devastate Eskridge, and fire was not the only disaster the town suffered. Two years later, a “terrific cyclone” severely damaged half of the town including the high school and two churches, and completely destroyed twenty-five homes. No one was seriously injured. Once again, the town began rebuilding immediately.

By 1911, Eskridge had expanded to over 1,200 residents and seventy-five businesses, including five department stores, six produce houses, a photography gallery, and a piano store. The debt-free town



Christian Church After the Tornado, 1911
kansasmemory.org, Kansas State Historical Society

operated its own electric power plant. The town was both a center of commerce and a cultural center for the area. Eskridge had led the effort that established a superior high school system in the county with college credits. The *Star*, one of three local newspapers, boasted 1,800 subscriptions. A 500-seat, open-air “Air Dome” was one of two moving picture theaters. The Opera House continued to thrive, hosting European musicians.

The settlers’ children, raised in a culture of ranching, education, and arts, made Eskridge proud. Joseph Lockhart’s daughter Caroline (b. 1870) had a remarkable career

as an East Coast journalist, then later as a best-selling western novelist and rancher in Cody, Wyoming, and as the owner/ editor of the *Cody Enterprise*. With Buffalo Bill she founded the Cody Stampede. In 2018, Caroline was inducted into the National Cowgirl Museum and Hall of Fame. Hazel Eden (b.1885), daughter of the Garden of Eden’s developer, became a nationally recognized soprano. Trained at the Shakespeare Theater of London, Hazel sang lead soprano with the Boston English Opera Company and the Century English Opera Company. Grace Bowman (b.1888), daughter of one of the Cattle

Kings, attended the Leland Powers Theater School in Boston and operated a successful acting school in Hollywood, training such notables as Mickey Rooney.

When the Great Depression hit, Eskridge newspaperman Frank Frost proposed building a lake as a public works project. Citizens throughout the county petitioned for it. In 1933 barracks were built for 200 men to begin clearing a valley west of town. In 1936, the work force doubled and construction continued around the clock. By the end of spring 1938, Eskridge’s Lake Wabaunsee had filled. During WWII, 150 German prisoners of war lived in the barracks and worked as farm labor throughout the county during the summers of 1944 and 1945. Despite limited security, there were no escape attempts. Many prisoners maintained contact with their “employers” after the war.

Following WWII, Eskridge’s population shrank to 500, but the town still supported dozens of businesses, including a Harvard-trained doctor, three car dealerships, three grocery stores and a butcher, a blacksmith, and a drug store with a soda fountain and a pharmacy. Ranchers Ed Van Petten, Bob Widau, and Wendell Trantor organized the first Eskridge Labor Day Rodeo, a tradition that continues today. On Saturday nights the town bustled with families coming from miles around to socialize. Cars filled both sides and the middle of Main Street.

In July 1960, the town saw an immediate, albeit temporary, population jump. The U.S. Air Force had designated a pasture northeast of Eskridge near Keene to house a seventy-five-foot-tall Atlas rocket with a nuclear warhead that could be dropped with precision 6,000 miles away. Engineers, construction workers, and technicians lived in and around town during the construction. The project was completed in 1961, and the Atlas rocket lay in its “coffin-silo” four years before it was decommissioned.

In the 1960s, the trains quit running, replaced by cattle trucks. More and more residents began commuting to Topeka to work and shop. Local businesses suffered. Today, Eskridge is working to revitalize the spirit of the early years. Young residents are restoring the park and promoting the town as a viable and appealing place to live and raise families.

Bruce Waugh grew up in Eskridge, where his family has lived since 1884. He lives and practices law in Kansas City, Kansas, and relaxes at his home outside Eskridge.



Chapman Posts Near Lake Kahola
Dave Leiker

CHAPMAN POSTS

If you're driving in the central Flint Hills around Council Grove, you might see an unusual-looking fence post—a large chunk of limestone with a three-foot length of two-inch pipe rising straight up out of the middle.

Holes have been drilled through the pipe and large six-penny nails inserted and bent up at the tip in order to hold barbed wire. Often the top has been capped with concrete, keeping rainwater out so the pipe does not rust out at the bottom.

This unusual-looking post is sometimes referred to as a “pipe-in-rock post”; a “rock-and-iron-pipe post”; a “patent post”; or a “Chapman post,” named after Philip Chapman, who obtained a patent on it back at the turn of the twentieth century. These posts come in three types: a barbed-wire post, a woven-wire post, and a corner post.

Woven-wire posts are maybe a little less than a foot square and a foot and a half high. The front side is flat with a slot cut into it to hold the pipe, which is bolted into the slot. This type of post would have been used in a hog lot or in a pasture where sheep were being pastured so that the woven wire could go clear to the ground, whereas the lowest wire on a barbed-wire post would rest on or near the top of the rock, around fifteen inches off the ground.

A Chapman corner post would be used not only at a fence corner but also on either side of a gate or cattle guard. It is constructed by first placing a large, flat chunk of limestone into the ground, drilling a hole into the middle, and inserting into it a piece of heavy pipe or iron rod. Next, a stone post several inches square and close to four feet long is quarried, a hole drilled into the center of

its bottom end, and then the hole placed over the rod of the ground piece.

From what I have been able to learn, this type of post is unique to the Flint Hills. Today, with modern power tools for drilling holes or pounding steel posts into rocky ground, building fence in the Flint Hills is much easier than it was in the 1880s when digging or punching a hole into ground where rocks lie only a couple of inches below the surface would have been much harder. Thus, a fence that required no hole digging or drilling would have been much easier to install. In essence a Chapman post is actually portable, although it requires great effort to move one.

Who invented this unique type of post? In 1879 Philip Chapman, a white man, moved to Dunlap in Morris County, just over the Lyon County line, the town where in 1878 Benjamin “Pap” Singleton had established a colony for former slaves, called Exodusters. Chapman may indeed have invented the fence post that bears his name (as his grandson, the late A. H. Hermstein of Council Grove, believed), but oral tradition credits its creation to Harrison Fulghum or some other Exoduster (perhaps Levi McCoy or the Tipple brothers), many of whom were listed in the 1880 census as stone masons.

The fact that the only patent I could locate was for the woven-wire post, granted to Chapman in July of 1903, eight months

after he had filed his application in November of 1902, suggests that corner and barbed-wire posts were already in common use in that area of the Flint Hills.

Crews of Exodusters would go out with mules and stone boats (a sort of low wooden sled) a week at a time, sleeping on the ground and eating around a campfire. They would locate a good vein of limestone in or near the pasture to be fenced, then quarry blocks of stone and sled them to the site of the fence they were building. A crew could make and place several barbed-wire posts a day, but corner posts took up to four days from quarrying to final placement.

Fulghum was later hired by the Aye and Chase ranches to build fences in Geary County. He would haul four limestone-rock bases at a time to the site of the fence, hanging them below the running gears of a wagon, placing them in line, then drilling holes in the rocks and pounding pipe into them.

What the charge was for the actual building of a mile of fence, I don’t know, but the cost of a single fence post, from quarrying to placing in the fence line, was twenty-five cents. A corner post cost a dollar and a half.

Chapman set up a kind of factory where in the winter he hired some of the black men in the Dunlap area to make posts. Then in the spring and summer he would take a crew out to set them up and



Piled Chapman Posts
Dave Leiker

string wire. Fulghum is also said to have made posts in the winter for later use in warm weather.

Today steel posts in pasture fences are usually set around twelve to fifteen feet apart, but the gap between Chapman posts was much greater, perhaps not so much from expense as from weight. Many early Chapman posts were set twenty feet apart, some up to three rods. If the latter distance, often a hedge post was placed halfway between them, which meant a post every twenty-five feet, which seems typical of Chapman-post fences.

I have seen a few of these posts still in use today, but more often you will see several discarded Chapman posts lying a few yards inside a new steel-post fence, or used as decorations in someone's yard. (We have two straddling the driveway to our house.) A roadside business along Interstate 70 about halfway between Manhattan and Topeka has 250 of them around the parking lot. When I asked the proprietor about them, he said that his property had originally been part of the old Aye Ranch. He bought the posts for ten dollars apiece (not a bad rate of return on a post for which Harrison Fulghum had originally charged a quarter) and moved them with a backhoe and front-end loader (much easier than with a mule-powered sled or wagon).

One of the most unusual uses of a Chapman post can be seen on the road that leads to Lake Kahola, where there

are a number of ten-foot-high posts. Look closely and you can see a glass insulator at the top of each pipe. These were early-day telephone poles set up by a rancher who wanted phone service and had to install his own line.

Jim Hoy, Director Emeritus of the Center for Great Plains Studies at Emporia State University, is the author of *Flint Hills Cowboys* (2006) and the forthcoming *Gathering Strays in the Flint Hills: Observations, Contemplations, and Reminiscences from the Last Tallgrass Prairie in America*.



Descending
Matthew Regier



A Blanketed Landscape IV
Mark Feiden

FOLLOWING SPREAD

Eclipse at Teter Rock
Dave Leiker

ROOTED IN STONE

A song that uses stone as a symbol of the strength, ruggedness, and endurance of the pioneers who settled the Flint Hills of Kansas.

They crossed the wide Missouri
stream, rolled into the prairie to
find their dream.
Pioneers spread out across this land,
to build their home, by their own hand.
But trees were scarce, there was no wood,
so they turned to what they had,
did what they could.
They framed and built their frontier home,
rooted in stone, rooted in stone.

For centuries the tall grasses stand,
on stony soils and hilly land.
Rooted in stone they feed the cow, but
stand their ground against the plow.
Beneath that grass, our ancestors rest,
for they built this state and they
stood the test.

Their name lives on above their bones,
rooted in stone, rooted in stone.

The fence law came with the cattle trails,
but trees were few to split for fence rails.
So, horse high, bull strong, and pig
tight they stood, stone wall fences
instead of wood.

Stone-built churches reach to the sky,
and declare our faith to God on high.
Like life's commandments from the Throne,
rooted in stone, rooted in stone.

Oh, give me a rangeland home,
that's rooted firm in stone.
A land of God's good earth,
the land of my birth.
To the stars through difficulty,
its name stands in history.
A state we call our own,
that's rooted firm in stone.

This land called Kansas knows no bounds,
its people grow from solid ground.
Traces of our stone roots are there,
as we fly high through the air.
They say some states are carved or born,
while others come from hide n horn.
But Kansans built their rangeland home,
rooted in stone, rooted in stone.

Jeff Davidson's music reflects the serenity and solitude of the Flint Hills. Providing music across the state for years, Jeff and his songs focus on historical aspects of Kansas and history of the West.



